SJSU SAN JOSÉ STATE UNIVERSITY

College of Social Sciences · Psychology

Elementary Statistics

STAT 95

Fall 2025 Section 07 In Person 3 Unit(s) 08/20/2025 to 12/08/2025 Modified 09/17/2025

Contact Information

Instructor	Ángel Villicaña, M.S.
Email	Angel.villicana@sjsu.edu
Office Hours	Fridays, 2:00pm - 3:30pm or by appointment (DMH #230 or Zoom)
Class Schedule	STAT 95-07: Fridays, 9:30-12:15pm

Course Description and Requisites

Hypothesis testing and predictive techniques to facilitate decision-making; organization and classification of data, descriptive and inferential statistics, central tendency, variability, probability and sampling distributions, graphic representation, correlation and regression, chi-square, t-tests, and analysis of variance. Computer use in analysis and interpretation.

GE Area(s): B4. Mathematics/Quantitative Reasoning

Note(s): A grade of "C-" (1.7) or better is required to satisfy GE Area B4. Intended for Psychology majors and minors as well as for programs in Behavioral Science, Child Development, Education, Health Science, Nursing, Nutritional Science, Social Science, and Social Work.

Prerequisite(s): Math Enrollment Category M-I or M-II, or for Categories III ori¿½lV¡ï¿½completion of a GE Area B4 course with a grade of "C-" or better.

Letter Graded

Classroom Protocols

Communication

Please reach out whenever you have questions, concerns, or curiosities. You may contact me via email (angel.villicana@sjsu.edu (mailto:(angel.villicana@sjsu.edu))) or Canvas messaging. Please include the class and section number in the subject line. I aim to respond within 1–2 business days. Messages sent over the weekend may not receive a response until Monday.

I encourage you all to reach out often and early. Your presence and contributions to this class matter. Please let me know if there is anything I can do to help improve your learning experience.

Office Hours

My regular office hours are Fridays from 2 pm - 3:30 pm in DMH #230. I am also available by appointment, either in person or via Zoom (depending on your schedules). I encourage you to use office hours to discuss course material, assignments, or any questions about your progress in the class.

Respectful Learning Environment

We strive for a classroom where all students feel safe, supported, and heard. Please:

- Listen when others are speaking and contribute constructively.
- Avoid side conversations during class and labs.
- Respect diverse perspectives and experiences.

Accessibility & Accommodations

San José State University is committed to providing equitable access to learning for all students. The Accessible Education Center (AEC) will notify me of students with documented accommodations. However, it is your responsibility to meet with me if you would like to discuss how your accommodations may apply in this course. Please reach out early in the semester so we can plan together and ensure your needs are met.

AI Policy

Generative artificial intelligence tools—software that creates new text, images, computer code, audio, video, and other content—are widely available. Well-known examples include ChatGPT (text) and DALL·E (images). This policy governs all such tools, including those released during our semester together.

- You may use generative AI tools to **brainstorm initial ideas, create outlines, or do minor revisions** for assignments in this course.
- You may **not use AI tools to write your assignments for you**.
- If you use AI on assignments, you must document and credit the tool. Cite the tool using APA format (as software), and include a brief (25-100 word) description of how you used it. Add this paragraph at the end of your text, before the References list; it is **not included** in the word count.

Important considerations:

- AI tools are trained on limited, pre-existing datasets that may be out-of-date or include copyrighted material. Reliance on AI can result in plagiarism, copyright violations, or inaccurate content.
- You are responsible for ensuring that all submitted work reflects your own understanding, is accurate, and maintains academic integrity.

- Unauthorized or improper use of AI will be addressed under the **SJSU Academic Integrity Policy**. Consequences for a first offense may range in severity; repeated offenses may result in more serious academic review.

Program Information

Welcome to this General Education course.

SJSU's General Education Program establishes a strong foundation of versatile skills, fosters curiosity about the world, promotes ethical judgment, and prepares students to engage and contribute responsibly and cooperatively in a multicultural, information-rich society. General education classes integrate areas of study and encourage progressively more complex and creative analysis, expression, and problem solving.

The General Education Program has three goals:

Goal 1: To develop students' core competencies for academic, personal, creative, and professional pursuits.
Goal 2: To enact the university's commitment to diversity, inclusion, and justice by ensuring that students have the knowledge and skills to serve and contribute to the well-being of local and global communities and the environment.
Goal 3: To offer students integrated, multidisciplinary, and innovative study in which they pose challenging questions, address complex issues, and develop cooperative and creative responses.

More information about the General Education Program Learning Outcomes (PLOs) can be found on the GE website (https://sjsu.edu/general-education/ge-requirements/overview/learning-outcomes.php).

Course Goals

Goal 1. Knowledge Base of Statistics: Students will demonstrate familiarity with the major concepts in statistics.

Goal 2. Application of Statistical Concepts: Students will be able to solve mathematical problems, including those presented in verbal form.

Goal 3. Critical Thinking Skills: Students will develop the ability to arrive at descriptive and inferential conclusions based on mathematical data presented through such forms as statistics, tables, graphs, and computer outputs.

Goal 5. Values in Psychology: Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as members of society.

Course Learning Outcomes (CLOs)

GE Area B4: Mathematics/Quantitative Reasoning

Area B4 courses develop students' abilities to reason quantitatively, practice computational skills, and explain and apply mathematical and/or quantitative reasoning concepts to solve problems at the college level. Completion of Area B4 with a grade of C- or better is a CSU graduation requirement.

GE Area B4 Learning Outcomes

Upon successful completion of an Area B4 course, students should be able to:

1. use mathematical methods to solve quantitative problems, including those presented in verbal form;
2. interpret and communicate quantitative information using language appropriate to the context and intended audience;
3. reason, model, draw conclusions, and make decisions based on numerical and graphical data; and
4. apply mathematical or quantitative reasoning concepts to solve real life problems.

Writing Practice: Students will write a minimum of 500 words in a language and style appropriate to the discipline.

Course Materials

Fundamental Statistics for the Social and Behavioral Sciences

Author: Howard T. Tokunaga
Publisher: SAGE
Edition: 2nd
Year: 2019
ISBN: 978-1506377483
Availability: SJSU Campus Bookstore, Amazon

I highly recommend purchasing or renting a used copy to avoid the high cost of statistics textbooks. PDF copies of chapters will be made available under each module, but they **do not** contain the full scope of the textbook.

SPSS (Statistical Package for the Social Sciences)

Software is available for download through the University MySJSU, required to do some assignments.

Availability: Univeristy MySJSU

Excel

Software is available for download through the Univeristy MySJSU, required to do homework. If you want a research career, you want to get introduced to these programs.

Availability: Univeristy MySJSU

Calculators & Graphing Tools

Technology Requirements

You will need regular access to Canvas, where you'll find course resources, quizzes, mini-guides, and exams. Reliable Wi-Fi and a laptop or tablet are required to submit assignments on Canvas and to use during exams (which are taken on Canvas, even though our class meets in person). A smartphone calculator is not recommended. Instead, you are invited to use the online calculators and graphing tools provided in the "**Class Resources**" module on Canvas for all in-class activities and assignments.

Course Requirements and Assignments

Attendance

Note that University policy F69-24, "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to ensure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Exams x 3 (40%)

There will be **three exams** held on the days and times listed on the syllabus and Canvas (most up-to-date option). The exams will be open-book and will consist of multiple-choice questions based on the lecture, the textbook, and the assignments. In-depth exam instructions are provided at least one week in advance in class and on Canvas.

There will be two midterms and one final in-class exam. The first two exams are not cumulative, but the concepts build over time. The final third exam will also have a cumulative component addressing critical concepts and issues covered during the semester.

- You will need a calculator (see Class Materials module for online options).
- The number and difficulty of the questions will make it difficult to do well unless you have adequately studied.
- You will be asked to submit a 'cheat sheet' before each exam as a way to practice summarizing and preparing annotated notes.

Exam Make-up Policy

Exams will be completed on Canvas during our scheduled class time. If you anticipate a conflict, contact me at least one week in advance to discuss alternatives. Make-up or early exams are possible for documented reasons (e.g., unavoidable appointments, university-sanctioned events, health or family emergencies). Conflicts such as personal travel or routine appointments should be arranged around exam dates. All make-up exams must be completed within 5 days of the original exam date unless otherwise arranged.

Quizzes x 12 (15%)

There will be twelve quizzes in total throughout the semester, worth up to 15% of your final grade. These are multiple-choice questions and are meant to test you on conceptual problem-solving. You get three tries per quiz, after which your highest score will be recorded.

Submission: Quizzes are completed in class on Fridays, following instructions on Canvas. If you cannot finish in class, you may submit on Canvas by Sunday at 11:59pm of the same week as a grace period under the Late Work policy. Quizzes are intended to be done in class first.

Mini-guides x 12 (25%)
You will be asked to complete twelve mini-guide assignments. These are short assignments to practice weekly concepts.

Guidelines:

- You MUST provide the question being answered, followed by your answer, in the order given in the assignment.
- Show your work wherever possible (e.g., showing use of formulas).

Grading Basis:

- Points will be lost for incomplete answers or explanations.

Submission: Mini-guides are worked on during Friday class. Instructions and rubrics are on Canvas. If you need extra time, you may submit by Sunday 11:59 PM (grace period only). Mini-guides are primarily in-class assignments.

Revisions and Grading Questions: We will often review mini-guides together in class so you can see how to approach each problem. If you lose points, you may revise and resubmit your mini-guide within one week of grades being released to earn back credit. For quizzes, exams, or other assignments, please contact me within one week of receiving your grade if you'd like to discuss it.

Buddy Project (20%)
Work in **pairs** (groups of 3 with permission) to select a research topic, collect survey data, analyze it, and present your findings in an **in-class poster session**. We will discuss presentation formats in class. Detailed instructions and rubrics are on Canvas.

Timeline & Checkpoints:

- **Week 7 (Oct 3):** Form pairs & submit short topic proposal.
- **Week 11 (Oct 31):** Draft survey/instrument due.
- **Week 13 (Nov 14):** Data collection progress report due.
- **Week 16 (Dec 5):** Final poster/presentation session in class.

Submission: Submit your final presentation on Canvas in PowerPoint, Google Slides, or PDF. Label slides as `"STAT95-07_LAST,FIRST NAME."` Each group member submits their own copy.

✔ Grading Information

Grading Breakdown

Exams x 3 …… ……..40%

Mini Guides x 12……..25%

Quizzes.……15%

Project……20%

Course Grading Scale (% of Total Points):

A+ 96-100% B+ 86-89% C+ 76-79% D+ 66-69% F<60%

A 93-95% B 83-85% C 73-75% D 63-65%

A- 90-92% B- 80-82% C- 70-72% D- 60-62%

Late Work

All individual assignments may be submitted up to 48 hours after the deadline with no penalty. After 48 hours, an automatic 10% deduction per day applies. However, please keep in mind that delays on group-related assignments may delay the success and progress of your group.

Quizzes and Mini-Guides are intended to be completed in class. Students may use Sunday 11:59 PM of the same week as a grace period for any in-class assignments not completed. Other late submissions follow the standard late policy.

Please reach out early or as soon as possible if you anticipate difficulty meeting a deadline. Communication before the due date can often prevent penalties and allow for alternative arrangements when appropriate.

Extra Credit – 2%

Opportunities may be provided for students up to two percentage points of the total course grade. These may range from one-page literature reviews, video essays, or research event summaries submitted. Submission portals with further instructions will be provided on Canvas.

University Policies

Per University Policy S16-9 (PDF) (http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant 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 the Syllabus Information (https://www.sjsu.edu/curriculum/courses/syllabus-info.php) web page. Make sure to visit this page to review and be aware of these university policies and resources.

Course Schedule

Date	Lecture Topic	Readings (Tokunaga, 2nd ed.)	Assignments Due (Canvas)
Week 1: Aug 22	Course Introduction: Welcome to Statistics!	—	—
Week 2: Aug 29	Chapter 1: Introduction to Statistics (Part 2)	Ch. 1	Mini 1: Intro to Variables (Aug 31); Quiz 1: Types of Variables (Aug 31)
Week 3: Sep 5	Chapter 2: Organizing Data (Tables, Graphs, Frequency Distributions)	Ch. 2	Quiz 2: Frequency Plots (Sep 5); Mini 2: Frequency Tables, Histograms & Polygons (Sep 17 revision extension)
Week 4: Sep 12	Chapter 3: Measures of Central Tendency	Ch. 3	Quiz 3: Central Tendency (Sep 12); Mini 3: Central Tendency (Sep 14)
Week 5: Sep 19	Chapter 4: Measures of Variability; Class review of Ch. 1-4	Ch. 4	Quiz 4: Variability (Sep 19); Mini 4: Measures of Variability (Sep 19)
Week 6: Sep 26	**Exam 1 (Chs. 1–4)**	Review notes + study guide	Exam 1 (Canvas, in-class)
Week 7: Oct 3	Chapter 5: Sampling & Probability Basics	Ch. 5	Quiz 5: Sampling & Probability (Oct 3); Mini 5 (Oct 3); **Buddy Project Group Formation & Topic Proposal (Oct 3)**
Week 8: Oct 10	Chapter 6: Hypothesis Testing (Concepts, Errors, Steps)	Ch. 6	Mini 6 (Oct 10); Quiz 6 (Oct 10)
Week 9: Oct 17	Chapter 7: Hypothesis Testing (z-tests, one-sample)	Ch. 7	Mini 7 (Oct 17); Quiz 7 (Oct 17); **Buddy Project Check-ins (Oct 17)**

Date	Lecture Topic	Readings (Tokunaga, 2nd ed.)	Assignments Due (Canvas)
Week 10: Oct 24	**Exam 2 (Chs. 5–7)**	Review notes + study guide	Exam 2 (Canvas, in-class)
Week 11: Oct 31	Chapter 8: t-tests (Independent & Dependent)	Ch. 8	**Buddy Project: Survey Due** Mini 8: Analyses Using Real Data (Oct 31); Quiz 8 (Oct 31)
Week 12: Nov 7	Chapter 9: One-Way ANOVA	Ch. 9	Mini 9 (Nov 7); Quiz 9 (Nov 7)
Week 13: Nov 14	Chapter 10: Correlation & Regression I	Ch. 10	Mini 10 (Nov 14); Quiz 10 (Nov 14); **Buddy Project: Data Collection and Analysis Progress Report (Nov 14)**
Week 14: Nov 21	Chapter 11: Correlation & Regression II; Multiple Regression	Ch. 11	Mini 11 (Nov 21); Quiz 11 (Nov 21)
Week 15: Nov 28	**No Class – Thanksgiving Holiday**	—	(Take home) Quiz 12 (Nov 28)
Week 16: Dec 5	Chapter 12: Chi-Square & Nonparametric Tests + Final Review	Ch. 12	Final Mini-Guide #12 (due Dec 7); **Buddy Project: Final Poster/Presentations in class (Dec**
Week 17: Dec 10 (Wed)	**Exam 3 (Comprehensive final)**	All chapters	Final Exam (Canvas, in-person): 10:45am - 12:45pm (Dec 10).