

Intermediate Statistics

STAT 115

Fall 2026 Section 02 In Person 3 Unit(s) 08/19/2026 to 12/07/2026 Modified 08/18/2026

Contact Information

Ginevra Marta Scherini

Office Hours (please note the different offices below):

Tuesday: 4:30 PM to 5:30 PM in **Dudley Moorhead Hall (DMH) Room 232**

Wednesday: 1 PM to 2 PM in **Business Tower (BT) Room 660**

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Course Information

Lecture Hours: Tuesday Thursday 3 pm – 4:15 pm

Lecture Location: **Hugh Gillis Hall Room 124**

Course Description and Requisites

Statistical analysis at the intermediate level; chi-square, analysis of variance, correlation and regression, and topics in experimental design; use of microcomputers for statistical calculations.

Prerequisite(s): STAT 95 (or equivalent).

Grading: Letter Graded

Note(s): Intended for majors in education, nursing, personnel administration, psychology, social service and sociology, and psychology minors.

Classroom Protocols

- Treat each other with respect throughout the semester.

- Computers and phones are allowed for note taking and accessing materials online during class, but should be put away during exams.
- Phones and computers should not be disruptive to the learning experience. They should be used for class-related activities. **Please refrain from using your devices outside of class purposes** as they can distract yourself and others from the learning experience.
- For guidelines on what to do if you miss class, refer to the [Missed Class Flowchart](https://sjsu.instructure.com/courses/1634831/pages/what-to-do-when-missing-class-flowchart) (<https://sjsu.instructure.com/courses/1634831/pages/what-to-do-when-missing-class-flowchart>) before contacting me.

Academic Integrity and Use of AI in this Course

Generative AI tools such as ChatGPT, Claude, and Gemini can create text or images. This policy applies to these tools as well as new generative AI tools that may become available during the semester.

When can I use AI?

You may use generative AI for an assignment only when I specifically say that AI use is allowed for that assignment. If I have not said that you may use AI, please assume that you should complete the work without it. When AI use is permitted, think of it as a tool to support your learning rather than a replacement for your own work.

Examples of when you may use AI:

- Brainstorming ideas or possible topics for projects.
- Generating images or other visual improvements to your presentations.
- Serving as a study aid by explaining concepts, creating practice questions, or helping you review course material.
- Assisting with data analysis by suggesting search terms, helping you identify the proper analyses to use, or providing data insights that you then verify using reliable sources.

Examples of when you may not use AI:

To write your presentations, data analysis discussions, or conduct analyses and provide key points for your discussion. AI should not be used to produce any other type of work that you submit as your own.

If you are unsure whether AI is allowed for a particular assignment, assessment, or other course activity, please ask me before using it.

If AI is allowed, what do I need to do?

When you use a generative AI tool for coursework, you are responsible for being transparent about that use.

You should: Cite the AI tool according to the appropriate course style guide. Include a brief explanation of how you used the tool. For example, you might explain that you used AI to brainstorm ideas, organize an outline, create an image, study course material, or assist with research.

Remember: AI is Inaccurate

Generative AI can be useful, but its responses are not automatically accurate or reliable. AI tools may

provide incorrect or inaccurate conclusions about your data, that is why it is important for you to learn how to conduct the analyses and verify that the results are accurate. AI tools are not in class with us and do not know which exact analyses, techniques, and terminology we are using for this class, specifically. Always review, fact-check, and evaluate AI-generated material carefully before using it to inform your work.

Academic Integrity and Possible Consequences

Using generative AI when it has not been permitted, submitting AI-generated work as your own, or failing to acknowledge your use of AI when required may be considered academic dishonesty or plagiarism.

Depending on the situation, consequences may include:

- Receiving a zero on the assignment.
- Meeting with me to discuss the assignment and your use of generative AI.
- Being asked to explain your ideas, writing process, sources, or submitted work.
- Having the incident addressed according to the [SJSU Academic Integrity Policy](https://www.sjsu.edu/studentconduct/conduct-processes/academic-integrity.php).
(<https://www.sjsu.edu/studentconduct/conduct-processes/academic-integrity.php>).

Program Information

Program learning outcomes (PLOs) are skills and knowledge that students will have achieved upon completion of the Psychology BA degree. Each course in our curriculum contributes to one or more of these PLOs. The PLOs for the Psychology BA degree are:

1. Knowledge Base of Psychology. Students will be able to demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
 2. Research Methods in Psychology. Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.
 3. Critical Thinking Skills. Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.
 4. Applications of Psychology. Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.
- Values in Psychology. Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Course Learning Outcomes (CLOs)

Course learning outcomes (CLOs) are specific statements of what a student should be able to do upon the successful completion of this course. The following are the CLOs for this course:

1. Understand the logic of statistical concepts.
 - This objective is met through lectures.
2. Use appropriate statistical methods to solve quantitative problems and test hypotheses.
 - This objective is met through lectures and homework assignments.

3. Understand the logic and strategies of scientific research designs.
 - This objective is met through lectures and homework assignments.
4. Run statistical analyses using statistical analysis computer programs and interpret statistical information presented in the output.
 - This objective is met through lectures and homework assignments.

Course Materials

Textbook

Tokunaga, Howard T. (2018). Fundamental Statistics for the Social and Behavioral Sciences, 2nd Edition

ISBN-10: 1506377483

ISBN-13: 978-1506377483

Additional Text Resource

Illowsky, B., & Dean, S. (2020). Statistics. OpenStax.

<https://openstax.org/books/statistics/pages/1-introduction>

Other Materials

Scientific Calculator

A scientific calculator will be required for calculations during class and for exams. A scientific calculator has exponents and parentheses functionality such as a TI 30X or a Casio FX300 for around 10\$-15\$ (we do not need graphing calculators for this class).

Canvas

Check Canvas frequently for grades, materials, and assignments.

Qualtrics

We will be using the online surveying software Qualtrics for assignments throughout the course. You have access to the program for free by logging in with your SJSU account single sign-on credentials through qualtrics.sjsu.com

Google Sheets

We will be using Google Sheets to conduct statistical analyses, your SJSU Google account includes Google Sheets.

Computer

We will be using laptops periodically in class when learning how to conduct statistical analyses. Laptops can be borrowed from the [MLK Library \(https://library.sjsu.edu/student-computing-services\)](https://library.sjsu.edu/student-computing-services) and [SJSU IT \(https://www.sjsu.edu/it/services/classroom-tech/equipment-loaning/index.php\)](https://www.sjsu.edu/it/services/classroom-tech/equipment-loaning/index.php).

Course Requirements and Assignments

Students are expected to spend about 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities.

Course Requirements

Classes will be interactive, with both the instructor and students sharing in the process. Students are encouraged to read assigned materials prior to the class date and be prepared for discussions and exercises. It is to your advantage to stay current with readings and assignments. During class, we will have lecture time, experiential exercises, writing assignments, group projects, and class discussion.

Midterm examinations (40% of grade)

There will be a total of two midterm examinations. Please note: There will be NO make-up exams without instructor consent and arrangement before the scheduled time of the exam.

The exams will be based on lecture, textbook, and homework, and will consist of multiple choice, short essay, and computational questions. Please bring pencils, a scientific calculator (not your phone calculator) on the day of the exam.

Final examination (30% of grade)

The final exam will be similar in format to the other exams, focusing on material after the second midterm exam. There will, however, be a cumulative component that addresses the critical concepts and issues covered during the semester.

Assignments (30% of grade)

There will be individual homework and in-class group assignments throughout the semester. Their purpose is to build on and confirm your understanding of the material covered in lecture and textbook and provide practice for the exams. We will learn how to use software to conduct statistical analyses using Google Sheets and the survey platform Qualtrics. Some homework assignments will involve conducting analyses using these tools and interpreting the results.

Grading Information

I will post grades on Canvas throughout the semester so that you can keep track of your progress. If you need guidance on your grades in the class, please connect with me after class, during office hours, or via email.

Your course grade will be based upon a weighted combination of scores on the following components:

Assignments	% of grade
Homework and in-class assignments	30%
Midterm Exams	40%
Final Exam	30%

Percentage	Letter Grade
90% to 100%	A
86% to 89%	B+
80% to 85%	B
76% to 79%	C+
70% to 75%	C
60% to 69%	D
below 60%	F

Excused and Late Assignment Policy

If you have an excused absence (for medical reasons or otherwise unforeseen emergencies) please let me know as soon as possible and I will work with you to arrange a solution or makeup assignment. There will otherwise be **no make-ups for any missed in-class assignments**. Late homework assignments will be accepted up to 7 days after the deadline, with a 14% deduction per day late. After 7 days, late assignments will not be accepted.

Per [University Policy S16-9 \(PDF\)](http://www.sjsu.edu/senate/docs/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) (<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

Course Schedule

Assignments are subject to change. Any changes will be posted and updated on Canvas, please check Canvas regularly for announcements and updated deadlines. The chapters to read under 'Assignments' cover topics that will be in that week's lecture.

Date	Topic	Assignments
Week 1: Thursday Aug 20	Syllabus, Course Intro, Research Process	Chapter 1
Week 2: Tuesday Aug 25	Descriptive Statistics	Chapter 3-4
Week 2: Thursday Aug 27	Intro to Google Sheets Analytics	
Week 3: Tuesday Sep 1	Intro to Qualtrics Surveys	HW 2 due
Week 3: Thursday Sep 3	Normal Distribution	Chapter 5
Week 4: Tuesday Sep 8	Sampling Distribution	HW 1 due

Week 4: Thursday Sep 10	In-class activity (bring computers)	HW 2 due
Week 5: Tuesday Sep 15	Midterm Exam 1	
Week 5: Thursday Sep 17	Probability and Hypothesis Testing	Chapter 6
Week 6: Tuesday Sep 22	Probability and Hypothesis Testing (continued)	HW 3 due
Week 6: Thursday Sep 24	Single Sample t-test	Chapter 7
Week 7: Tuesday Sep 29	2 Independent Sample t-test	HW 4 due Chapter 9
Week 7: Thursday Oct 1	Matched Pairs t-test	HW 5 due
Week 8: Tuesday Oct 6	Errors in Hypothesis Testing / Statistical Power	Chapter 10
Week 8: Thursday Oct 8	One-way Analysis of Variance (ANOVA)	Chapter 11
Week 9: Tuesday Oct 13	Two-way ANOVA	Chapter 12
Week 9: Thursday Oct 15	Two-way ANOVA (continued)	HW 6 due

Week 10: Tuesday Oct 20	Midterm Exam 2	
Week 10: Thursday Oct 22	Correlation	Chapter 13
Week 11: Tuesday Oct 27	Linear Regression	Chapter 14
Week 11: Thursday Oct 29	Chi Square	
Week 12: Tuesday Nov 3	Correlation and Regression on Google Sheets	HW 7 due
Week 12: Thursday Nov 5	Group Assignment: Experimental Design	
Week 13: Tuesday Nov 10	Veteran's Day – No Class	
Week 13: Thursday Nov 12	Group Assignment: Gathering Data	
Week 14: Tuesday Nov 17	Group Assignment In-class Work	Group Assignment 1 Due
Week 14: Thursday Nov 19	Group Assignment: Data Analysis	Group Assignment 2 Due
Week 15: Tuesday Nov 24	Group Assignment: Reporting Findings	Group Assignment 3 Due

Week 15: Thursday Nov 27	Thanksgiving Break - No Class	
Week 16: Tuesday Dec 1	Group Assignment Presentations	Final Group Slides for Presentations Due
Week 16: Thursday Dec 3	Group Assignment Presentations and Final Exam Review	
Final Exam: Thursday, December 10 1:00-3:00 PM in Hugh Gillis Hall Room 124		