STAT 115: Intermediate Statistics Section 02

San Jose State University Fall 2025
Department of Psychology
Instructor: Ginevra Scherini, MS
E-mail: ginevra.scherini@sjsu.edu
Telephone: 408-924-5658
Lecture Hours: Tuesday Thursday 1:30 pm – 2:45 pm
Lecture Location: DMH 356
Office Locations: Dudley Moorhead Hall (DMH) 232
Office Hours: Monday 2:00 – 3:00 pm and Thursday 3:00 – 4:00 pm

Course Format

This course will be taught in-person live (synchronous) and will have assignments and content accessed through Canvas. You are responsible for regularly checking Canvas for any updates regarding assignments, materials, and exams.

Course Description

Statistical analysis at the intermediate level; chi-square, analysis of variance, correlation and regression, by using experimental design and computer software for analysis and interpretation.

Prerequisite: STAT 95 (or equivalent).
Notes: Intended for majors in education, nursing, personnel administration, psychology, social service and sociology, and psychology minors.
Letter Graded

Learning Outcomes

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.

Department of Psychology Program Learning Outcomes

1. Knowledge Base of Psychology: Students will be able to identify, describe, and communicate 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 in Psychology: 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. Application of Psychology: Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.
5. Values in Psychology: Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

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 Resource

Illowsky, B., & Dean, S. (2020). Statistics. OpenStax.
https://openstax.org/books/statistics/pages/1-introduction

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

Computer

We will be using computers in class when learning how to conduct statistical analyses. Laptops can be borrowed from the MLK Library and SJSU IT.

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.

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. Other course structures will have equivalent workload expectations as described in the syllabus.

Classroom Etiquette:

- We are expected to treat each other with respect throughout the semester.
- When in doubt, simply treat others as you would wish to be treated.
- 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 Canvas page to determine how to **catch up before emailing me**.

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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
Grades will be posted 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 activities, quizzes, or exams. You may turn in homework late for partial credit.

University Policies
Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/.

Student Resources

Psychology Department Librarian: Christa Bailey christa.bailey@sjsu.edu 408-808-2422
The SJSU library has a librarian who specializes in psychology and other social sciences. This librarian can serve as a very valuable resource for helping you develop research ideas and locating appropriate research materials. The library also has an abundance of resources for doing psychology research: https://libguides.sjsu.edu/psychology

Student Technology Resources

- MLK Library Online Resources: https://library.sjsu.edu/
- STTC's Technology Resource Guide: https://libguides.sjsu.edu/sttc
- eCampus Student Tech Resources: https://www.sjsu.edu/learnanywhere/equipment/index.php

ACCESS Success Center
The Academic Counseling Center for Excellence in Social Sciences (ACCESS) Success Center provides general education advising for undergraduate students majoring or intending to major in any of the departments in The College of Social Sciences. Find out more here: https://www.sjsu.edu/access/

SJSU Peer Connections

Peer Connections offers free tutoring, instruction assistance, and strengths coaching for SJSU students. Find out more on their website: https://www.sjsu.edu/peerconnections/index.php

SJSU Writing Center

The SJSU Writing Center offers a variety of free resources to help students become better writers. Check out their online tutoring and live tutor chat service here: https://www.sjsu.edu/writingcenter/

SJSU Counseling and Psychological Services

SJSU Counseling and Psychological Services provides personal and clinical counseling as well as clinical case management, workshops, and groups for all SJSU students. Find out more at: https://www.sjsu.edu/counseling/about/what-we-do.php

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 21	Syllabus, Course Intro, Research Process	Chapter 1
Week 2: Tuesday, Aug 26	Descriptive Statistics	Chapter 3-4, HW 1 due
Week 2: Thursday, Aug 28	Intro to Google Sheets Analytics	
Week 3: Tuesday, Sep 2	Intro to Qualtrics Surveys	HW 2 due
Week 3: Thursday, Sep 4	Normal Distribution	Chapter 5
Week 4: Tuesday, Sep 9	Sampling Distribution	
Week 4: Thursday, Sep 11	In-class activity (bring computers)	HW 3 due
Week 5: Tuesday, Sep 16	Midterm Exam 1	
Week 5: Thursday, Sep 18	Probability and Hypothesis Testing	Chapter 6
Week 6: Tuesday, Sep 23	Probability and Hypothesis Testing (continued)	HW 4 due
Week 6: Thursday, Sep 25	Single Sample t-test	Chapter 7
Week 7: Tuesday, Sep 30	2 Independent Sample t-test	HW 5 due Chapter 9
Week 7: Thursday, Oct 2	Matched Pairs t-test	HW 6 due
Week 8: Tuesday, Oct 7	Errors in Hypothesis Testing / Statistical Power	Chapter 10
Week 8: Thursday, Oct 9	One-way Analysis of Variance (ANOVA)	Chapter 11
Week 9: Tuesday, Oct 14	Two-way ANOVA	Chapter 12
Week 9: Thursday, Oct 16	Two-way ANOVA (continued)	HW 7 due
Week 10: Tuesday, Oct 21	Midterm Exam 2	

Week 10: Thursday, Oct 23	Correlation	Chapter 13
Week 11: Tuesday, Oct 28	Linear Regression	Chapter 14
Week 11: Thursday, Oct 30	Chi Square	
Week 12: Tuesday, Nov 4	Correlation and Regression on Google Sheets	HW 8 due
Week 12: Thursday, Nov 6	Group Assignment: Experimental Design	
Week 13: Tuesday, Nov 11	Veteran's Day – No Class	
Week 13: Thursday, Nov 13	Group Assignment: Gathering Data	
Week 14: Tuesday, Nov 18	Group Assignment In-class Work	Group Assignment 1 Due
Week 14: Thursday, Nov 20	Group Assignment: Data Analysis	Group Assignment 2 Due
Week 15: Tuesday, Nov 25	Group Assignment: Reporting Findings	Group Assignment 3 Due
Week 15: Thursday, Nov 27	Thanksgiving Break - No Class	
Week 16: Tuesday, Dec 2	Group Assignment Presentations	Final Group Slides for Presentations Due
Week 16: Thursday, Dec 4	Group Assignment Presentations and Final Exam Review	
Final Exam: Tuesday, December 16 1:00-3:00 PM in DMH 356		