San José State University
Department of Psychology
Statistics 115, Intermediate Statistics, Section 80, Fall 2022

Course and Contact Information

Instructor:	Greg Savage, M.A.
Office Location:	N/A
Telephone:	408-924-5648
Email:	Gregory.Savage@sjsu.edu
Office Hours:	Monday to Thursday 11:30 AM to 12:00 PM
Class Days/Time:	Tuesday and Thursday from 9:00 AM to 10:15 AM
Classroom:	Online
Prerequisites:	Statistics 95 (or equivalent)

Course Description
Statistical analysis at the intermediate level; chi-square, analysis of variance, correlation and regression, and topics in experimental design

Course Format

This course follows an online synchronous format with lectures, discussions, and activities taking place during scheduled Zoom meetings. Please see the course schedule for specific due dates.

Course Learning Outcomes

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

CLO 1- Understand statistical concepts and vocabulary

CLO 2- Understand the statistical methods covered during the semester, including when they are used, how they are used, and why they are used in addition to the logic/theory behind each method and what each method is

able to accomplish.

CLO 3- Determine what statistical method should be used in a certain situation, use that method, and then correctly interpret the results.

CLO 4- Perform certain statistical calculations and / or graphing of data

CLO 5- Solve problems involving statistics

CLO 6- Perform statistical calculations or graphing with real data sets and correctly interpret the results

CLO 7- Use statistical software

CLO 8- Understand how statistical methods fit into the big picture of research including why they are needed, how they are used, and what they are able to accomplish.

CLO 9- Understand the limitations of statistical inference in general and in specific situations

CLO 10- Understand the factors that can affect the validity of the results of a statistical procedure and be able to determine whether the results of a statistical procedure are valid in a certain type of situation.

Program Learning Outcomes (PLO)

Upon successful completion of the psychology major requirements…

PLO1 – 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.

PLO2 – 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.

PLO3 – 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.

PLO4 – Application of Psychology – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

PLO5 – Values in Psychology – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Required Texts/Readings

Textbook

There is no required textbook for this course.

If you would like for me to recommend a statistics textbook (or other resource) to use as a reference, please

speak with me as soon as possible.

Other technology requirements / equipment / material

Students will need to have reliable internet access outside of class. Students will need to have a basic calculator that can add, subtract, multiply, divide, square numbers, and find square roots.

Course Requirements and Assignments

Exams:

One midterm exam and one non-cumulative final exam will take place during the semester.

Exams might include multiple choice questions, short answer questions, and questions that ask students to perform calculations or graphing.

Both exams are open-notes but will need to be completed individually.

Both exams will be posted on Canvas and each student will need to upload them to Canvas by their due dates.

A late midterm exam will lose 10% of credit for each day that it is submitted late (until it is worth 50% credit)

A late final exam will lose 10% of credit for each hour that it is submitted late and can't be submitted more than 10 hours late.

Even though the final exam is not technically cumulative, it will be important to remember information from earlier in the semester because later topics build on earlier topics.

All information that I share with the class is material that I might ask about on an exam.

Cheating on exams will not be tolerated. Please refer to the section on Academic Integrity for information on the consequences of cheating.

Activities:

Each week, each student will complete an activity that will be posted on Canvas.

The activities that we complete during the semester might include running simulations (with cards or websites), collecting data from other students or the internet, performing calculations, creating graphs or diagrams, or other types of activities.

Each activity will be due at the deadline provided in the course schedule (by Canvas upload) and will lose 10% of credit for each day that it is submitted late (until it is worth 50% credit)

Homework Assignments:

Each week, each student will complete a homework assignment that will be posted on Canvas.

Each homework assignment might include (but is not necessarily limited to) multiple choice questions, fill-in the blank questions, matching questions, short answer questions, graphing / diagramming questions, or questions asking for calculations. Some homework questions might ask for you to perform hand calculations (with work shown on paper), and some homework questions might ask for you to use Google Sheets.

All the questions on homework assignments will be my own questions (since there is no required textbook).

Each homework assignment will be due at the deadline provided in the course schedule (by Canvas upload) and will lose 10% of credit for each day that it is submitted late (until it is worth 50% credit).

Quizzes:

Each week, students will complete an online quiz on Canvas.

Each week on Thursday, the quiz will be activated after class (or possibly during class) and will be open until Sunday at midnight.

Each quiz will be open-notes and open-book.

Each quiz might include multiple choice, short answer, or short essay questions.

Each quiz will include questions on the current week's material and possibly review questions.

Each quiz will lose 10% of credit for each hour that it is late, and all quizzes that are submitted more than 5 hours late will have a 50% penalty.

Discussion Board Responses:

Each week, students will be required to respond to a set of 3 questions posted on the Canvas discussion board.

Each week, the first 2 questions will focus on material we have covered in lecture. These questions might include (but are not necessarily limited to) questions that ask you to describe your understanding of a certain topic, questions that ask you to analyze a real or hypothetical scenario presented in the question, questions that ask you to analyze or describe a video, website, table/diagram, or file attachment, questions that ask you to run simulations and describe your results, and questions that ask you to provide examples of concepts.

The third question will ask you to pose a question about the current week's material or to attempt to answer another student's question.

Each week, you won't be able to see other students' answers to the first two questions before submitting your own answer. However, you will be able to see other students' answers to the third question.

Although you can talk about the questions with each other or look up information online to include in your answers, your answers need to show effort at putting information into your own words. Students won't receive credit for answers that are copied from another student or from the internet. If you have any questions about paraphrasing information, please send me an email or come to my office hours.

During each week that discussion questions are assigned, your responses are due on Tuesday at midnight and will lose 10% of credit for each day that they are submitted late. Any discussion response that is more than 5 days late will receive a 50% penalty.

After submitting an answer to a discussion question, you will have until Sunday at midnight to earn partial credit by posting corrections to your original answer. If you make a correction, you will earn 50% credit for each piece of information that you successfully correct.

Please don't post a blank or incomplete response to gain access to other students' answers on the discussion board. If you do this, you will lose 50% of credit for each piece of information that you post after having access to other students' answers (because it will be considered a correction to your original answer).

Note: "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."

Final Examination or Evaluation

The final exam will be a take home exam and will be similar in format to the midterm. The final exam might include multiple choice questions, short answer questions, and questions that ask students to perform calculations or graphing.

Grading Information

Exams:

Students' answers to multiple choice questions will be graded based on accuracy (i.e., whether they are answered correctly or incorrectly).

Students' answers to short answer questions will be graded using content rubrics.

Students' answers to calculation / graphing questions will be graded based on how thoroughly they are completed and on accuracy.

Students can receive partial credit on exam questions that ask for calculations or graphing (since these questions will have multiple steps and it is possible for an answer to be partially correct but not completely correct).

Activities:

Each activity will be graded based on how thoroughly it is completed, effort, and accuracy (when appropriate).

If you ever experience difficulty while completing a certain activity, it is highly recommended that you ask for assistance. I will be able to assist students and check students' answers during class on Thursdays.

Homework Assignments:

Students' grades on weekly homework assignments will be based on how thoroughly the assignments are completed and on accuracy. Students can receive partial credit on their answers to certain homework questions if their answers are partially correct but not completely correct.

Quizzes:

Each student will have one attempt at each quiz.

On each quiz, you will receive 50% credit for each question that you answer incorrectly and a small amount of extra credit for each question that you answer correctly.

Each quiz is worth 2 points of credit. Therefore, you can calculate the number of points that each individual question is worth on a certain quiz by dividing 2 by the number of questions asked on that quiz.

Each quiz is worth 0.2 points of extra credit. Therefore, you can find the number of extra credit points that each question is worth on a certain quiz by dividing 0.2 by the number of questions asked on that quiz.

Discussion Board Responses:

Your answer to each discussion board question will be graded based on a rubric that is provided along with the question. These rubrics will provide information about required (or recommended) length and required content.

Determination of Grades

Your final grade will be based on the number of points that you earn during the semester. The following table provides a breakdown of the 146 points that you can earn during the semester.

Homework Assignments (13 total)- 26 points
In-class Assignments (14 total)- 28 points
Quizzes (15 total)- 30 points
Discussion Board Responses (15 total) – 30 points

Exam 1 – 16 points
Exam 2 - 16 points

Grading Scale:

A- 90 – 100%
B – 80 – 89%
C – 70 – 79%
D – 60 – 69%
F – 59% and below

Late Work:

Each student will be allowed to submit up to two of each type of assignment late with only 20% of the typical late penalty. All late work must be submitted by the deadline of the final exam.

Classroom Protocol

Class Sessions: Class sessions will include (but might not be limited to) lectures and activities. Each week during Tuesday's lecture, an in-class extra credit opportunity will be offered that is worth up to 1% of extra credit on the upcoming exam. The weekly extra credit opportunity might involve problem solving, calculations, graphing, conceptual questions, or any other reasonable type of requirement related to the course material. Each week's extra credit opportunity will have its own submission link. Although it is expected that you will work on the extra credit opportunity during class, you will have until midnight of the class day to submit it.

Attendance: Attending class is important because the material being discussed will be covered on exams, homework assignments, activities, and discussion questions.

Arrival times: Please come to class on time if it is at all possible. Arriving late to class is distracting to other students and will cause you to miss information discussed in class.

Behavior: Please be respectful toward the other students in the class and me. Please be cooperative and non-disruptive during Zoom sessions. Please don't allow your microphone to produce distracting background noise.

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/"

San Jose State University
Statistics 115: Intermediate Statistics, Section 80,
Fall Semester 2022,
Course Schedule

Course Schedule: This schedule is subject to change with fair notice. I will inform students of any changes made to the schedule through a Canvas announcement.

Week	Date	Topics	Deadlines
1	Tuesday Aug 23 Thursday Aug 25	Variables and Data Values Variables and Data Values	Thursday Aug 25 Activity 1 due at midnight
2	Tuesday Aug 30 Thursday Sept 1	Populations and Samples Populations and Samples	Sunday Aug 28 Quiz 1 due at midnight Tuesday Aug 30 Discussion Set 1 due at midnight Thursday Sept 1 Homework 1 due at midnight Activity 2 due at midnight
3	Tuesday Sept 6 Thursday Sept 8	Descriptive Statistics Descriptive Statistics	Sunday Sept 4 Quiz 2 due at midnight Tuesday Sept 6 Discussion Set 2 due at midnight Thursday Sept 8 Homework 2 due at midnight Activity 3 due at midnight
4	Tuesday Sept 13	Descriptive Statistics	Sunday Sept 11 Quiz 3 due at midnight

	Thursday Sept 15	Descriptive Statistics	Tuesday Sept 13 Discussion Set 3 due at midnight Thursday Sept 15 Homework 3 due at midnight Activity 4 due at midnight
5	Tuesday Sept 20 Thursday Sept 22	Frequency Distributions Frequency Distributions z scores	Sunday Sept 18 Quiz 4 due at midnight Tuesday Sept 20 Discussion Set 4 due at midnight Thursday Sept 22 Homework 4 due at midnight Activity 5 due at midnight
6	Tuesday Sept 27 Thursday Sept 29	Probability Sampling Distributions	Sunday Sept 25 Quiz 5 due at midnight Tuesday Sept 27 Discussion Set 5 due at midnight Thursday Sept 29 Homework 5 due at midnight Activity 6 due at midnight
7	Tuesday Oct 4 Thursday Oct 6	Sampling Distributions Sampling Distributions	Sunday Oct 2 Quiz 6 due at midnight Tuesday Oct 4 Discussion Set 6 due at midnight Thursday Oct 6 Homework 6 due at midnight

			Activity 7 due at midnight
8	Tuesday Oct 11	Sampling Distributions	Sunday Oct 9 Quiz 7 due at midnight
	Thursday Oct 13	Sampling Distributions	Tuesday Oct 11 Discussion Set 7 due at midnight Thursday Oct 13 Homework 7 due at midnight Activity 8 due at midnight
9	Tuesday Oct 18	Margin of Error	Sunday Oct 16 Quiz 8 due at midnight
	Thursday Oct 20	Margin of Error	Tuesday Oct 18 Discussion Set 8 due at midnight Thursday Oct 20 **Midterm Exam due at midnight** Homework 8 due at midnight Activity 9 due at midnight
10	Tuesday Oct 25	Confidence Intervals	Sunday Oct 23 Quiz 9 due at midnight
	Thursday Oct 27	Confidence Intervals	Tuesday Oct 25 Discussion Set 9 due at midnight Thursday Oct 27 Homework 9 due at midnight Activity 10 due at midnight
11	Tuesday Nov 1	Confidence Intervals	Sunday Oct 30 Quiz 10 due at midnight
	Thursday Nov 3	Confidence Intervals	Tuesday Nov 1 Discussion Set 10 due at midnight Thursday Nov 3 Homework 10 due at midnight

			Activity 11 due at midnight
12	Tuesday Nov 8	Introduction to Hypothesis Testing	Sunday Nov 6 Quiz 11 due at midnight
	Thursday Nov 10	Introduction to Hypothesis Testing	Tuesday Nov 8 Discussion Set 11 due at midnight
			Thursday Nov 10 Homework 11 due at midnight Activity 12 due at midnight
13	Tuesday Nov 15	Two Sample t test	Sunday Nov 13 Quiz 12 due at midnight
	Thursday Nov 17	Two Sample t test	Tuesday Nov 15 Discussion Set 12 due at midnight
			Thursday Nov 17 Homework 12 due at midnight Activity 13 due at midnight
14	Tuesday Nov 22	One-way ANOVA	Sunday Nov 20 Quiz 13 due at midnight
	Thursday Nov 24	No Class	Tuesday Nov 22 Discussion Set 13 due at midnight
15	Tuesday Nov 29	Two-way Chi square test	Sunday Nov 27 Quiz 14 due at midnight
	Thursday Dec 1	Two-way Chi square test	Tuesday Nov 29 Discussion Set 14 due at midnight
			Thursday Dec 1 Homework 13 due at midnight Activity 14 due at midnight

Please verify all web links are active prior to online publication. Revised in June, 2016

16	Tuesday Dec 6	Correlation	Sunday Dec 4 Quiz 15 due at midnight Tuesday Dec 6 Discussion Set 15 due at midnight
	Wednesday Dec 14		**Final Exam is due at 10 PM**