San José State University  
Department of Psychology  
Statistics 115, Intermediate Statistics, Section 80, Spring 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: Tuesday and Thursday 12:00 to 1:00 PM
Class Days/Time: Tuesday and Thursday from 1:30 PM to 2:45 PM
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 before midnight 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 hour that they are submitted late. Any discussion response that is more than 5 hours 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 in-class assignment, 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 138 points that you can earn during the semester.

Homework Assignments (13 total)- 26 points
Activities (13 total)- 26 points
Quizzes (13 total)- 26 points
Discussion Board Responses (14 total) – 28 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 can request an extension for up to 4 assignments (but not for quizzes, exams, or group submissions).

To request an extension for an assignment, you must contact me and explain how much time you need to complete the assignment.

You also must contact me no later than 2 days after the assignment’s original deadline.

The limit for an extension is 5 days.

After requesting an extension, the new deadline that we are agree upon can’t be changed. If you don’t make the new deadline, the late penalty for the assignment will apply.

If you have requested 4 extensions and have submitted the assignment by the new deadline all 4 times, you can contact me to request 3 additional extensions.

The same rules will apply when you make use of these 3 additional extensions.

Each you make use of one these extensions, you must contact me and explain how much time you need to complete the assignment.

You also must contact me no later than 2 days after the assignment’s original deadline.

Once again, the limit for an extension is 5 days.

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](http://www.sjsu.edu/gup/syllabusinfo/) at http://www.sjsu.edu/gup/syllabusinfo/’
San Jose State University  
Statistics 115: Intermediate Statistics, Section 80,  
Spring 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.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Deadlines</th>
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<tbody>
<tr>
<td>1</td>
<td>Tuesday Feb 1</td>
<td>Variables and Data</td>
<td>Thursday Feb 1</td>
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<td>Values</td>
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<td>Thursday Feb 3</td>
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<td>Tuesday Feb 8</td>
<td>Populations and Samples</td>
<td>Sunday Feb 6</td>
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<td>Thursday Feb 10</td>
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<td>Descriptive Statistics</td>
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<td>Tuesday Feb 22</td>
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<td>Tuesday March 1</td>
<td>Frequency Distributions</td>
<td>Sunday Feb 27</td>
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<td>Tuesday March 8</td>
<td>Probability</td>
<td>Sunday March 6</td>
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<td>Thursday March 10</td>
<td>Sampling Distributions</td>
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<td>7</td>
<td>Tuesday March 15</td>
<td>Sampling Distributions</td>
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<td>Sampling Distributions</td>
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<td>Homework 6 due at midnight</td>
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<td>Activity 7 due at midnight</td>
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<td>Tuesday March 22</td>
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<td>Thursday March 24</td>
<td>Margin of Error</td>
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<tr>
<td>9</td>
<td>Spring Break</td>
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| 10  | Tuesday April 5       | Confidence Intervals     | Sunday April 3
Quiz 8 due at midnight |
|     | Thursday April 7      | Confidence Intervals     | Tuesday April 5
Discussion Set 8 due at midnight |
|     |                       |                          | Thursday April 7
Homework 8 due at midnight
Activity 9 due at midnight |
| 10  | Tuesday April 12      | Introduction to          | Sunday April 10
Quiz 9 due at midnight |
|     |                      | Hypothesis Testing       | Tuesday April 12
Discussion Set 9 due at midnight |
|     |                      |                          | Thursday April 14
Midterm Exam due at midnight
Homework 9 due at midnight
Activity 10 due at midnight |
| 11  | Tuesday April 19      | Two Sample t test        | Sunday April 17
Quiz 10 due at midnight |
|     |                      | Two Sample t test        | Tuesday April 19
Discussion Set 10 due at midnight |
|     |                      |                          | Thursday April 21
Homework 10 due at midnight
Activity 11 due at midnight |
| 12  | Tuesday April 26      | Two Sample t test        | Sunday April 24
Quiz 11 due at midnight |
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<td>Two Sample t test</td>
<td>Tuesday April 26&lt;br&gt;Discussion Set 11 due at midnight&lt;br&gt;Thursday April 28&lt;br&gt;Homework 11 due at midnight&lt;br&gt;Activity 12 due at midnight</td>
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<td>13</td>
<td>Tuesday May 3&lt;br&gt;Thursday May 5</td>
<td>One-way ANOVA&lt;br&gt;One-way ANOVA&lt;br&gt;Sunday May 1&lt;br&gt;Quiz 12 due at midnight&lt;br&gt;Tuesday May 3&lt;br&gt;Discussion Set 12 due at midnight&lt;br&gt;Thursday May 5&lt;br&gt;Homework 12 due at midnight&lt;br&gt;Activity 13 due at midnight</td>
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<td>Tuesday May 10&lt;br&gt;Thursday May 12</td>
<td>Chi-square test of independence&lt;br&gt;Correlation&lt;br&gt;Chi-square test of independence&lt;br&gt;Correlation&lt;br&gt;Sunday May 8&lt;br&gt;Quiz 13 due at midnight&lt;br&gt;Tuesday May 10&lt;br&gt;Discussion Set 13 due at midnight&lt;br&gt;Thursday May 12&lt;br&gt;Homework 13 due at midnight&lt;br&gt;Activity 14 due at midnight</td>
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<tr>
<td>Friday May 20</td>
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<td>Final Exam is due at midnight</td>
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