

San José State University
Psychology Department
STAT095, Elementary Statistics, Winter 2024

Course and Contact Information

Instructor(s):	Ravneet Tiwana, Ph.D.
Office Location:	https://sjsu.zoom.us/my/ravneet.tiwana
Telephone:	408-924-5611
Email:	ravneet.tiwana@sjsu.edu
Student Drop-In Hour:	Tuesdays, 12:00-1:00 pm PT or “By Appointment”
Class Days/Time:	Asynchronous
Classroom:	Online - Canvas (https://sjsu.instructure.com/courses/1577864)
Prerequisites:	Math Enrollment Category M-I or M-II, or for Categories III or IV, completion of a GE Area B4 course with a grade of C- or better.
GE/SJSU Studies Category:	B4

Note: 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.

Course Description

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.

Course Format: Online Hybrid

Canvas Page

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on Canvas Learning Management System course login website at (<https://sjsu.instructure.com/courses/1577864>). You are responsible for regularly checking with the messaging system through MySJSU on Spartan App Portal, <http://one.sjsu.edu> to learn of any updates. For help with using Canvas see [Canvas Student Resources page](https://www.sjsu.edu/learnanywhere/how-tos/canvas/index.php) (<https://www.sjsu.edu/learnanywhere/how-tos/canvas/index.php>).

There are eleven modules in this course that cover course content. The module topics can be viewed in the course calendar. Each module will be released at 12am PT on the date listed in the course calendar.

Program Learning Outcomes (PLO)

Upon successful completion of the psychology major requirements,

Knowledge Base of Psychology: *Students will be able to demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.*

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.*

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.*

Application 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.*

Student Learning Objectives

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

Learning Objective 1 (GELO1): *Mathematical concepts courses should prepare the student to use mathematical methods to solve quantitative problems, including those presented in verbal form.*

Learning Objective 2 (GELO2): *Mathematical concepts courses should prepare the student to demonstrate the ability to use mathematics to solve real life problems.*

Learning Objective 3 (GELO3): *Mathematical concepts courses should prepare the student to arrive at conclusions based on numerical and graphical data.*

Learning Objective 4 (Specific to Area B4): *Focus on basic mathematical techniques for solving quantitative problems and elementary numerical calculation.*

Learning Objective 5 (Specific to Area B4): *Focus on organization, classification, and representation of quantitative data in various forms (e.g., tables, graphs, percentages, measures of central tendency, and spread).*

Learning Objective 6 (Specific to Area B4): *Focus on applications of mathematics to everyday life.*

Learning Objective 7 (Specific to Area B4): *Focus on applications of mathematical concepts to statistical inference.*

Required Texts/Readings

Textbook

Salkind, Neil J. (2020). Statistics for People Who (Think They) Hate Statistics (7th Edition). Los Angeles, CA: SAGE. ISBN: 9781544381855.

Other Readings

Ad Hoc readings will be added to the Canvas page for this course as necessary by the instructor.

Technology Requirements / Equipment / Material

Students are required to have an electronic device (laptop, desktop or tablet) with a camera and built-in microphone. SJSU has a free [equipment loan](#) program available for students. Students are responsible for ensuring that they have access to reliable Wi-Fi during tests. If students are unable to have reliable Wi-Fi, they must inform the instructor, as soon as possible or at the latest one week before the test date to determine an alternative. See [SJSU Learn Anywhere](#) website for current Wi-Fi options on campus.

Here is a list of required software you will need in order to be successful in the course.

1. Computer, Internet, and SJSU library access.
2. Microsoft Word, Excel, and PDF software
 - a. SJSU students have **FREE** access to Microsoft Office 365 (which includes Word & PowerPoint & MS Excel): see [SJSU IT Services Software Instructions \(https://www.sjsu.edu/it/services/applications/office.php\)](https://www.sjsu.edu/it/services/applications/office.php).

Student Technology Training Center

If you need support and training to use technology, please go to the [Student Technology Training Center \(https://libguides.sjsu.edu/sttc\)](https://libguides.sjsu.edu/sttc)

Library Liaison

Christa Bailey (christa.bailey@sjsu.edu). [Libguide](#)

Student Drop-In Hour

Please do your best to contact Dr. Tiwana before you come to see her during office hours by contacting her via email or through the Canvas “Inbox” feature. In your communication please include a specific agenda and/or questions to guide your office hour visit..

Electronic Communication

All email communications should be addressed to Dr. Tiwana’s sjsu.edu address (listed above) and include “Stat 95” in the subject line. **You can also send Dr. Tiwana a message through Canvas “Inbox”.** Dr. Tiwana will respond to your message within 24-48 hours.

Checking Canvas regularly

Dr. Tiwana regularly posts announcements and materials via our course Canvas page. You will need to regularly check the [STAT 095 course Canvas page](#).

Checking your SJSU email regularly & STAT095 Canvas Course Inbox

If Dr. Tiwana needs to contact you or send you feedback on an assignment, she will contact you via your SJSU email account or the STAT095 Canvas course account. Therefore, you need to regularly check your SJSU email and [STAT 095 Canvas Course page](#). Please allocate at least 24-48 hours to receive electronic responses to your messages.

STAT095 Tutoring Support

SJSU tutors can help supplement your learning of course content. Here are the available services.

Peer Connections

Visit this website: <http://peerconnections.sjsu.edu/>.

CHHS Student Success Center – Tutoring for Stat 95

Visit this website: <http://www.sjsu.edu/chhs-ssc/>

Call or email for appointments: 408.924.2910; Email: chahssuccesscenter@sjsu.edu

Location: MacQuarrie Hall (MH) 533 - top floor of MacQuarrie Hall and a new second location in Room 105 of the Health Building.

Zoom Classroom Etiquette

- Mute Your Microphone: To help keep background noise to a minimum, make sure you mute your microphone when you are not speaking.
- Be Mindful of Background Noise and Distractions: Find a quiet place to “attend” class, to the greatest extent possible.
 - Avoid video setups where people may be walking behind you, people talking/making noise, etc.
 - Avoid activities that could create additional noise, such as shuffling papers, listening to music in the background, etc.
- Position Your Camera Properly Be sure your webcam is in a stable position and focused at eye level.
- Limit Your Distractions/Avoid Multitasking: You can make it easier to focus on the meeting by turning off notifications, closing or minimizing running apps, and putting your smartphone away (unless you are using it to access Zoom).
- Use Appropriate Virtual Backgrounds: If using a virtual background, it should be appropriate and professional and should NOT suggest or include content that is objectively offensive or demeaning.

Online Exams Testing Environment

Setup

- No earbuds, headphones, or headsets visible.
- The environment is free of other people besides the student taking the test.
- Well-lit environment. Can see the students’ eyes and their whole face. Avoid having backlight from a window or other light source opposite the camera.

Internet Connection Issues

Canvas autosaves responses a few times per minute as long as there is an internet connection. If your internet connection is lost, Canvas will warn you but allow you to continue working on your exam. A brief loss of internet connection is unlikely to cause you to lose your work. However, a longer loss of connectivity or

weak/unstable connection may jeopardize your exam.

Other Technical Difficulties

Immediately email the instructor a current copy of the state of your exam and explain the problem you are facing. Your instructor may not be able to respond immediately or provide technical support. However, the copy of your exam and email will provide a record of the situation.

Contact the SJSU technical support for Canvas: Technical Support for Canvas

(<https://www.sjsu.edu/ecampus/support/>)

Email: ecampus@sjsu.edu

Phone: (408) 924-2337

If possible, complete your exam in the remaining allotted time, offline if necessary. Email your exam to your instructor within the allotted time or soon after.

Recording Classes

This course or portions of this course (i.e., lectures, discussions, student presentations) will be recorded for instructional or educational purposes. The recordings will only be shared with students enrolled in the class through Canvas. The recordings will be deleted at the end of the semester. If, however, you would prefer to remain anonymous during these recordings, then please speak with the instructor about possible accommodations (e.g., temporarily turning off identifying information from the Zoom session, including student name and picture, prior to recording).

Students are not allowed to record without instructor permission. Students are prohibited from recording class activities (including class lectures, office hours, advising sessions, etc.), distributing class recordings, or posting class recordings. Materials created by the instructor for the course (syllabi, lectures and lecture notes, presentations, etc.) are copyrighted by the instructor. This university policy ([S12-7](#)) is in place to protect the privacy of students in the course, as well as to maintain academic integrity through reducing the instances of cheating. Students who record, distribute, or post these materials will be referred to the Student Conduct and Ethical Development office. Unauthorized recording may violate university and state law. It is the responsibility of students that require special accommodations or assistive technology due to a disability to notify the instructor.

Course Requirements and Assignments

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 for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practical. Other course structures will have equivalent workload expectations as described in the syllabus. More details about student workload can be found in [University Policy S16-9](#).

Statistical Analysis Assignments

You will complete eight statistical analysis assignments worth 50 points each. Some of these assignments will require you to analyze data using MS Excel computer software, create applicable graphs using Excel software, and write a concise APA style summary of the results using Word software. APA style summaries

must use correct grammar, punctuation, and statistical style (as described in the *Publication Manual of the American Psychological Association*, 7th ed.; we will review this in class). There is a 500-word writing requirement on topics relevant to this course, which will be covered by students' statistical journal entries and in-class data analysis assignments. Your writing will be assessed for grammar, clarity, conciseness, and coherence. You must turn in your assignment files (i.e., Word and/or Excel) via the course Canvas page (<https://sjsu.instructure.com/courses/1577864>). Google Docs or links will not be accepted. Fonts style, color, and size should be legible and readable. More information and assignment guidelines will be given in class.

Statistical Analysis Assignment Make-Up Policy

If you have a legitimate reason for missing the submission due date for a statistical analysis assignment, you may be permitted to make up the assignment. However, you will need to contact Dr. Tiwana via electronic communication (SJSU email or Canvas course page Inbox) before you will miss the assignment deadline and let her know your legitimate reason for needing an extension, and provide documentation verifying the legitimate reason. If you don't contact Dr. Tiwana at least 24 hours after the statistical analysis assignment was due, you will not be allowed a make-up, regardless of whether you have a legitimate excuse for missing the assignment deadline. For each 24-hour period that you submit an assignment after the due date/time without an approved extension, Dr. Tiwana will automatically subtract 50% off of your grade. No assignment will be accepted 48 hours after the due date/time or after grading is completed unless a prior extension has been agreed upon.

Statistics Journal Entries

Students will be expected to keep a digital statistics journal for this course and submit six entries on the course Canvas page (<https://sjsu.instructure.com/courses/1577864>) for a total of 60 points. The purpose of the journal is to provide a reflective space for students to better understand and address their anxiety and excitement about learning quantitative reasoning concepts. There is a 500-word writing requirement on topics relevant to this course, which will be covered by students; statistical journal entries and in-class data analysis assignments. Prompts to guide each reflective journal entry (a minimum of one-paragraph long) will be provided on the course Canvas page (<https://sjsu.instructure.com/courses/1577864>).

Statistics Journal Entries Make-Up Policy

If you have a legitimate reason for missing a statistics journal entry assignment deadline, you may be permitted to make up the assignment. However, you will need to contact Dr. Tiwana via electronic communication before you will miss the assignment submission deadline, let her know your legitimate reason for needing an extension, and provide documentation verifying the legitimate reason. If you miss a submission due to an unanticipated reason, contact Dr. Tiwana as soon as you can to explain your reason for missing the deadline and provide documentation of why. If you don't contact Dr. Tiwana at least 24 hours after the submission deadline, you will not be allowed make-up, regardless of whether you have a legitimate excuse. No assignment will be accepted 48 hours after the due date/time or after grading is completed unless a prior extension has been agreed upon.

Exams

There will be five electronic exams (in Canvas course page), worth 100 points each. All exams will include multiple-choice questions and narrative responses. Students will have 75 continuous minutes to complete each exam for one attempt unless a student has an official SJSU academic accommodation. Students may use their text, notes, and calculator, and will have access to all formulas and statistical tables, during exams. Exams cannot be taken earlier than the original scheduled date and time located in course syllabus. There is no comprehensive midterm or final exam.

Make-up Exams

If a student has a legitimate reason for missing the exam, a makeup exam may be permitted. However, the student will need to contact Dr. Tiwana as soon as the students can before the exam is scheduled to alert Dr. Tiwana that the student will miss the exam and let her know the legitimate reason for missing the exam. The student will also need to present written documentation verifying the legitimate reason, so that Dr. Tiwana and the student can collaboratively schedule the makeup exam as quickly as possible. All make-up exams must be completed within one-week following the original exam date and time. For each 24-hour period that you submit an exam after the due date/time without an approved extension, Dr. Tiwana will automatically subtract 10% off of your grade. Portions of exams cannot be made-up. An exam must be completed in its entirety in one sitting.

Student Learning Objective	Assignments/Exam
<i>Learning Objective 1 (GELO1): Mathematical concepts courses should prepare the student to use mathematical methods to solve quantitative problems, including those presented in verbal form.</i>	Statistical Analysis Assignments, Exams
<i>Learning Objective 2 (GELO2): Mathematical concepts courses should prepare the student to demonstrate the ability to use mathematics to solve real life problems.</i>	Statistical Analysis Assignments, Exams, and Statistical Journal
<i>Learning Objective 3 (GELO3): Mathematical concepts courses should prepare the student to arrive at conclusions based on numerical and graphical data.</i>	Statistical Analysis Assignments, Exams, and Statistical Journal
<i>Learning Objective 4 (Specific to Area B4): Focus on basic mathematical techniques for solving quantitative problems and elementary numerical calculation.</i>	Statistical Analysis Assignments and Exams.
<i>Learning Objective 5 (Specific to Area B4): Focus on organization, classification, and representation of quantitative data in various forms (e.g., tables, graphs, percentages, measures of central tendency, and spread).</i>	Statistical Analysis Assignments, Exams, and Statistical Journal
<i>Learning Objective 6 (Specific to Area B4): Focus on applications of mathematics to everyday life.</i>	Statistical Analysis Assignments, Exams, and Statistical Journal
<i>Learning Objective 7 (Specific to Area B4): Focus on applications of mathematical concepts to statistical inference.</i>	Statistical Analysis Assignments and Exams

Extra Credit Opportunities

There will be opportunities to obtain extra credit during the course. Please view the course Canvas page for more information.

Final Examination or Evaluation

There will be no comprehensive final exam. Students will be expected to take a topical exam during the scheduled final examination as indicated in the course calendar and schedule. Final exam cannot be taken before the scheduled date and time.

The university requires, according to University policy S17-1 (<http://www.sjsu.edu/senate/docs/S17-1.pdf>) which states that , “Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment.”

Grading Policy

A student’s grade will be based on the total amount of points (1000 possible points) they receive from exams (500 possible points), statistical analysis assignments (400 possible points), statistical journal entries (60 possible points), and check-for-understanding quizzes (40 points). Below is a breakdown of the amount of points needed to earn the specified letter grades. (*NOTE*: Individual exam and assignment totals may change over the course of the semester causing a change in the available total point total.) All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades. See University Policy F13-1 (<http://www.sjsu.edu/senate/docs/F13-1.pdf>) for more details.

Assignments	Points	Percentage of Total Grade
Statistics Journal Entries	6 x 10= 60 points	6%
Statistical Analysis Assignments	8 x 50= 400 points	40%
Check for Understanding Quizzes	4 x 10 = 40 points	4%
Exams	5 x 100= 500 points	50%
Totals	1000 points	100%

Grading Scale

Letter Grade	Percentage Range	Point Range
A+	100%	1000 plus points
A	~95-99%	945-999 points
A-	~90-94%	895-944 points
B+	~88-89%	875-894 points

B	~84-87%	835-874 points
B-	~80-83%	795-834 points
C+	~77-79%	765-794 points
C	~74-76%	735-764 points
C-	~70-73%	695-734 points
D+	~68-69%	675-694 points
D	~63-67%	619-675 points
D-	~60-62%	596-620 points
F	~59% or less	Less than 595 points

NOTE: Grade percentages will be rounded to the nearest whole number (i.e. 88.2% will be rounded to 88% and 88.5% will be rounded to 89%). Dr. Tiwana will NOT provide any student with an informal grade check at any point of the semester. It is recommended you view your grades on the Canvas course page if you would like to remain updated on your course grade. The only grade checks to be provided are those accompanying official SJSU forms (e.g., athletics, Greek life, probation).

Grading Information for GE/100W

For Basic Skills (A1, A2, A3, B4): “This course must be passed with a C- or better as a CSU graduation requirement.”

Links to University Policies

General Expectations, Rights and Responsibilities of the Student

Students are encouraged to familiarize themselves with SJSU’s policies and practices via University Policy S90–5 (<https://www.sjsu.edu/senate/docs/S90-5.pdf>). More detailed information on a variety of related topics is also available in the SJSU catalog (<https://catalog.sjsu.edu/>).

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness (<https://catalog.sjsu.edu/index.php?catoid=2>) Add/drop deadlines can be found on the current academic year calendars document (<https://www.sjsu.edu/provost/resources/academic-calendars/index.php>). The Late Drop Policy is available at <https://catalog.sjsu.edu/content.php?catoid=2&navoid=113>. Information about the latest changes and news is available at the Advising Hub at <http://www.sjsu.edu/advising/>.

Academic Integrity

The University Academic Integrity Policy S07-2 at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic coursework. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development (<https://www.sjsu.edu/studentconduct/>).

Campus Policy in Compliance with the American Disabilities Act

Presidential Directive 97-03 (https://www.sjsu.edu/president/docs/PD_1997-03.pdf) requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

Accommodation to Students' Religious Holidays

According to University Policy S14-7 (<https://www.sjsu.edu/senate/docs/S14-7.pdf>), SJSU shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class.

SJSU Writing Center & Counseling Services

The SJSU Writing Center is located in Clark Hall, Suite 126. To make an appointment or to refer to the online resources offered through the Writing Center, visit their website at <http://www.sjsu.edu/writingcenter>.

SJSU Counseling Services is located in the Student Wellness Center (SWC), Room 300B. To schedule an appointment or learn more information, visit the Counseling Services website at <http://www.sjsu.edu/counseling>.

STAT 095, Elementary Statistics, Winter 2024, Course Schedule

We will follow the schedule presented below to the greatest extent possible. However, the schedule is subject to change.

Course Schedule

Module	Release Date	Topic(s) & Readings	Assignments
1	Tuesday, 01/02	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Course Introduction & Study Skills 	Extra Credit Assignments
2	Tuesday, 01/02	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Statistics & Research Concepts ● Salkind, pgs.1-17 (Hard Copy Version) 	Statistics Journal, Entry #1 Statistical Analysis Assignment #1 Extra Credit Assignment
3	Tuesday, 01/02	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Variables & Measurement ● Salkind, pgs. 30-36 	Quiz #1 Statistical Analysis Assignment #2
	Tuesday, 01/02	Exam #1: Basic Statistics, Research Concepts, Variables, & Measurement	
4	Tuesday, 01/02	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Central Tendency & Variability ● Salkind, pgs. 21-30 (Central Tendency) ● Salkind, pgs. 41-55 (Variability) 	Statistics Journal, Entry #2 Statistical Analysis Assignment #3
	Tuesday, 01/02	Exam #2: Central Tendency & Variability	
5	Tuesday, 01/09	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Graphing Descriptive Data ● Salkind, pgs. 56-75 	Statistic Journal, Entry #3
6	Tuesday, 01/09	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Correlation & Regression ● Salkind, pgs. 76-102 (Correlation) ● Salkind, pgs. 274-292 (Regression) 	Quiz #2 Statistical Analysis Assignment #4
	Tuesday, 01/09	Exam #3: Correlation, Regression & Graphing Descriptive Data	
7	Tuesday, 01/09	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> ● Frequency Distributions 	Statistics Journal, Entry #4 Statistical Analysis Assignment #5

		<ul style="list-style-type: none"> • The Normal Distribution & Z-Scores • Salkind, pgs. 140-163 	
8	Tuesday, 01/09	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> • Hypothesis Testing Overview • Hypothesis Testing with Z-scores • Salkind, pgs. 186-198 	Quiz #3 Statistical Analysis Assignment #6
	Tuesday, 01/09	Exam #4: Hypothesis Testing & Z-Scores	
9	Tuesday, 01/16	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> • Hypothesis Testing with T-Tests • Single Sample T-Tests • Independent Sample T-Tests • Salkind, pgs. 199-214 	Statistics Journal, Entry #5 Statistical Analysis Assignment #7
10	Tuesday, 01/16	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> • Hypothesis Testing & One-Way Analysis of Variance (ANOVA) • Salkind, pgs. 229-247 	Quiz #4 Statistics Journal, Entry #6 Statistical Analysis Assignment #8
11	Tuesday, 01/16	<u>Live Session & Module Topic(s)</u> <ul style="list-style-type: none"> • Chi-Square • Salkind, pgs. 295-310 <p>Note: You are welcome to do practice problems in the “Time to Practice” section.</p>	
Final Exam	Friday, 01/19	Exam #5: Hypothesis Testing, T-Tests, & One-Way ANOVA & Chi-Square	