San José State University
Psychology Department
STAT095, Elementary Statistics, Section 7, Spring 2020

Course and Contact Information

Instructor(s): Ravneet Tiwana, Ph.D.
Office Location: Dudley Moorhead 230
Telephone: 408-924-8128
Email: ravneet.tiwana@sjsu.edu
Office Hours: Tuesdays & Thursdays, 5:00-5:30pm or “By Appointment”
Class Days/Time: Tuesdays, 5:30-8:15pm
Classroom: Dudley Moorhead Hall 160
Prerequisites: Math Enrollment Category M-I or M-II, or completion of a GE Area B4 course with a grade of C- or better. Notes: 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.

GE/SJSU Studies Category: B4

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.

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/1366599). 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 (http://www.sjsu.edu/ecampus/teaching-tools/canvas/student_resources).

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. Stat 95 meets this PLO

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.

**Stat 95 meets this PLO**

**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. **Stat 95 meets this PLO**

**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**


**Other Readings**

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

**Other technology requirements / equipment / material**

1. Scientific calculator (must have square root & exponent buttons).
2. Computer, Internet, and SJSU library access.
3. Microsoft Word, Excel, and SPSS software.
   a. SJSU students have **FREE** access to Microsoft Office 365 and Mobile (which includes Word & PowerPoint): see [https://ischool.sjsu.edu/post/microsoft-office](https://ischool.sjsu.edu/post/microsoft-office) for details.
   b. SJSU students can download SPSS for free (see [http://www.sjsu.edu/ecampus/research-tools/spss/index.html](http://www.sjsu.edu/ecampus/research-tools/spss/index.html)).

**Library Liaison**

Christa Bailey ([christa.bailey@sjsu.edu](mailto:christa.bailey@sjsu.edu)). Libguide: [http://libguides.sjsu.edu/psychology](http://libguides.sjsu.edu/psychology).

**Office Hours**

Please do your best to contact Dr. Tiwana before you come to see her during office hours. This will require you to generate a specific agenda and/or questions to guide your office hours visit. Unless, Dr. Tiwana has been contacted by a student letting her know that they plan to visit during her office hours, Dr. Tiwana may leave her office during office hours.

**Email Communication**

All email communications should be addressed to Dr. Tiwana’s sjsu.edu address (listed above) and include “Stat 95” in the subject line. **DO NOT email her through Canvas email as she will not reply.** As a rule of thumb, write separate emails for communicating separate topics, rather than writing about multiple topics under one email subject line, to avoid Dr. Tiwana missing any important information that you wish to convey.

**Checking Canvas regularly**

Dr. Tiwana regularly posts announcements and materials via our course Canvas page. You will need to regularly check the Stat 95 course Canvas page ([https://sjsu.instructure.com/courses/1366599](https://sjsu.instructure.com/courses/1366599)).

**Checking your SJSU email regularly**

If Dr. Tiwana needs to contact you or send you feedback on an assignment, she will contact you via your SJSU email account. Therefore, you need to regularly check your SJSU email.

**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 (normally three hours per unit per week) 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](https://sjsu.instructure.com/courses/1366599).

**In-Class Data Analysis Assignments**

You will complete six in-class data analysis assignments worth 10 points each. Class time will be allocated for you to work on each of these assignments. Assignments will be due by the end of class, 8:15pm. Some of these assignments will require you to analyze data using Excel/SPSS 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*, 6th 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, Excel, and/or SPSS...
files) via the course Canvas page (https://sjsu.instructure.com/courses/1366599). I will NOT accept a PDF file, Keynote file, Google Drive link, PowerPoint online link, or any other type of format than the ones I have specified above. More information and assignment guidelines will be given in class.

In-Class Data Analysis Make-Up Policy
If you have a legitimate reason for missing an in-class data analysis assignment, you may be permitted to make up the assignment. However, you will need to contact Dr. Tiwana via email before you will miss the class, let her know your legitimate reason for missing the class, and provide documentation verifying the legitimate reason you missed class. If you miss a class due to an unanticipated reason, contact Dr. Tiwana as soon as you can to explain your reason for missing and to provide documentation of why. If you don’t contact Dr. Tiwana at least 24 hours after the in-class assignment took place, you will not be allowed a make-up, regardless of whether you have a legitimate excuse for missing the class. 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.

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/1366599) for a total of 30 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/1366599).

Statistics Journal Entries Make-Up Policy
If you have a legitimate reason for missing a statistics journal entry assignment, you may be permitted to make up the assignment. However, you will need to contact Dr. Tiwana via email before you will miss the assignment submission deadline, let her know your legitimate reason for missing the class, and provide documentation verifying the legitimate reason you missed class. If you miss a submission due to an unanticipated reason, contact Dr. Tiwana as soon as you can to explain your reason for missing and to provide documentation of why. If you don’t contact Dr. Tiwana at least 24 hours after the submission deadline, you will not be allowed a make-up, regardless of whether you have a legitimate excuse for missing the class.

Exams
There will be five exams, worth 20 points each. All exams will include multiple-choice questions, will be taken in class, and will require minor computations. You may use your text, notes, and calculator, and will have access to all formulas and statistical tables, during exams. You may NOT use your phone as a calculator during class or for exams. You are not allowed to use a pen on the exam, so please bring pencils to each exam. I will provide answer sheets for each exam (no scantrons needed). There is no comprehensive midterm or final exam.

Exam Reviews
We will review every exam during the class period following the exam.

Make-up Exams
If you are not present for an exam, or if you arrive more than 15 minutes late to an exam, you will receive 0 points for that exam. If you have a legitimate reason for missing the exam or arriving substantially late to the exam, a makeup exam may be permitted. However, you will need to contact me as soon as you can before the exam is scheduled to alert me that you will miss the exam and let me know your legitimate reason for missing
the exam. You will also need to present written documentation verifying the legitimate reason, so that we can schedule the makeup exam as quickly as possible. All make-up exams must be completed before the corresponding exam review session following the exam you missed.

**Extra Credit Opportunities**

There will be ad hoc opportunities to obtain extra credit during the course. Please view the announcements made in class on the 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 schedule final examination as indicated in the course calendar.

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 (210 possible points) they receive from exams (100 possible points), in-class activities and data analysis assignments (80 possible points), and statistical journal entries (30 possible 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](http://www.sjsu.edu/senate/docs/F13-1.pdf)) for more details.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Percentage of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Journal Entries</td>
<td>6 x 5 = 30 points</td>
<td>14%</td>
</tr>
<tr>
<td>In-Class Activity Assignments</td>
<td>8 x 10 = 80 points</td>
<td>38%</td>
</tr>
<tr>
<td>Exams</td>
<td>5 x 20 = 100 points</td>
<td>48%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>210 points</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Grading Scale

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage Range</th>
<th>Point Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100%</td>
<td>210 plus points</td>
</tr>
<tr>
<td>A</td>
<td>~93-99%</td>
<td>195-209 points</td>
</tr>
<tr>
<td>A-</td>
<td>~90-92%</td>
<td>188-194 points</td>
</tr>
<tr>
<td>B+</td>
<td>~88-89%</td>
<td>184-187 points</td>
</tr>
<tr>
<td>B</td>
<td>~83-87%</td>
<td>174-182 points</td>
</tr>
<tr>
<td>B-</td>
<td>~80-82%</td>
<td>168-173 points</td>
</tr>
<tr>
<td>C+</td>
<td>~78-79%</td>
<td>163-167 points</td>
</tr>
<tr>
<td>C</td>
<td>~73-77%</td>
<td>153-162 points</td>
</tr>
<tr>
<td>C-</td>
<td>~70-72%</td>
<td>146-152 points</td>
</tr>
<tr>
<td>D+</td>
<td>~68–69%</td>
<td>142-145 points</td>
</tr>
<tr>
<td>D</td>
<td>~63–67%</td>
<td>132-141 points</td>
</tr>
<tr>
<td>D-</td>
<td>~60–62%</td>
<td>125-131 points</td>
</tr>
<tr>
<td>F</td>
<td>~59% or less</td>
<td>Less than 125 points</td>
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</tbody>
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**NOTE**: Dr. Tiwana will NOT provide any student with an informal grade check at any point of the semester. 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.”

**Classroom Protocol**

It is vital that students complete all scheduled readings and assignments before each class and university policy F69-24 ([http://www.sjsu.edu/senate/docs/F69-24.pdf](http://www.sjsu.edu/senate/docs/F69-24.pdf)) states that students should attend all meetings of their classes. Arrive to class on time. Arriving late disrupts other students and interferes with continuity of the lectures and class activities. If for any reason a student cannot avoid being late, please enter the class through the least noticeable door and take a seat quietly. Do not come in late and start a conversation to catch up on information you missed or expect information you missed to be repeated. Leaving early is equally disruptive; please be considerate. Do not carry on conversations during class. Do not sleep during class. Do not work on any other course material during class, including studying or reading for other classes. Be polite and respectful.
to classmates.

Classroom participation is expected. Therefore, phones, laptops, tablets, music players, etc. are not allowed to be used during class (i.e., all devices should be put away and set to not make any noise) so that one stays focused on class discussion, EXPECT for not-taking, use of MS Word, MS Excel, SPSS, and the course Canvas page as instructed by Dr. Tiwana.

DO NOT TEXT DURING LECTURE; students may be asked to leave for the remainder of the lecture. This rule is not only so students will not distract themselves but also so students will not distract anyone else. Food and drinks are permitted during class, but students must be sure that their space is clean when they leave the classroom. If students miss a class, they are responsible for contacting Dr. Tiwana or another student to inquire about the information they missed from that class session.

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 (http://www.sjsu.edu/senate/docs/S90-5.pdf). More detailed information on a variety of related topics is also available in the SJSU catalog (http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html).

Dropping and Adding
Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness (http://info.sjsu.edu/static/catalog/policies.html). Add/drop deadlines can be found on the current academic year calendars document (http://www.sjsu.edu/provost/services/academic_calendars/). The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

Consent for Recording of Class and Public Sharing of Instructor Material
University Policy S12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course. Therefore, neither recording of class lectures or discussions nor distribution of course materials are allowed. Failure to follow this policy will be considered a violation of course academic integrity policy and will result in immediate expulsion from the class, a grade of F in the course, and reporting the student to the University and proper authorities for further sanctions.

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 (http://www.sjsu.edu/studentconduct/).

Campus Policy in Compliance with the American Disabilities Act
Presidential Directive 97-03 (http://www.sjsu.edu/president/docs/directives/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 (http://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 Peer Connections
Peer Connections, a campus-wide resource for mentoring and tutoring, is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit Peer Connections website at http://peerconnections.sjsu.edu for more information.

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 Administration Building, Room 201. To schedule an appointment or learn more information, visit the Counseling Services website at http://www.sjsu.edu/counseling.
### Course Number / Title, Semester, Course Schedule

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

#### Course Schedule

<table>
<thead>
<tr>
<th>Week/Lesson /Module</th>
<th>Date</th>
<th>Topics &amp; Readings</th>
<th>Assignment Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tuesday, 1/28</td>
<td>Course Introduction &amp; Study Skills</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tuesday, 2/4</td>
<td>Statistics &amp; Research Concepts Variables &amp; Measurement</td>
<td>Statistics Journal, Entry #1</td>
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<tr>
<td></td>
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<td>In-Class Activity #1</td>
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<tr>
<td>3</td>
<td>Tuesday, 2/11</td>
<td><strong>Exam #1: Basic Statistics, Research Concepts, Variables, &amp; Measurement</strong></td>
<td>Statistics Journal, Entry #2</td>
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<tr>
<td></td>
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<td></td>
<td>In-Class Activity #2</td>
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<tr>
<td>4</td>
<td>Tuesday, 2/18</td>
<td>Review Exam #1 Central Tendency &amp; Variability</td>
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<tr>
<td>5</td>
<td>Tuesday, 2/25</td>
<td><strong>Exam #2: Central Tendency &amp; Variability</strong></td>
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<tr>
<td>6</td>
<td>Tuesday, 3/03</td>
<td>Review Exam #2 Central Tendency &amp; Variability</td>
<td>Statistics Journal, Entry #3</td>
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<td></td>
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<td></td>
<td>In-Class Activity #3</td>
</tr>
<tr>
<td>7</td>
<td>Tuesday, 3/10</td>
<td>Correlations</td>
<td></td>
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<tr>
<td>8</td>
<td>Tuesday, 3/17</td>
<td><strong>Exam #3: Graphing Descriptive Data &amp; Correlations</strong></td>
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<tr>
<td>9</td>
<td>Tuesday, 3/24</td>
<td>Review Exam #3 Frequency Distributions The Normal Distribution &amp; Z-Scores</td>
<td>Statistics Journal, Entry #4</td>
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<td></td>
<td>In-Class Activity #5</td>
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<tr>
<td></td>
<td>Tuesday, 3/31</td>
<td><strong>NO CLASS – SPRING BREAK</strong></td>
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<tr>
<td>10</td>
<td>Tuesday, 4/07</td>
<td>Hypothesis Testing Overview Hypothesis Testing with z-scores</td>
<td>In-Class Activity #6</td>
</tr>
<tr>
<td>11</td>
<td>Tuesday, 4/14</td>
<td><strong>Exam #4: Hypothesis Testing with Z-Scores</strong></td>
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<td>In-Class Activity #7</td>
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<tr>
<td>13</td>
<td>Tuesday, 4/28</td>
<td>Analysis of Variance (ANOVA)</td>
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<td>14</td>
<td>Tuesday, 5/5</td>
<td>Hypothesis Testing with ANOVA</td>
<td>Statistics Journal, Entry #6</td>
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<td>In-Class Activity #8</td>
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<tr>
<td><strong>Final Exam</strong></td>
<td>Tuesday, 05/19 5:15-7:30pm</td>
<td><strong>Exam #5: Hypothesis Testing with T-Tests</strong></td>
<td></td>
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