San José State University
Department of Psychology
Stat 95, Elementary Statistics, Section 7, Fall 2014

Instructor: Altovise Rogers, PhD
Office Location: DMH 312
Telephone: (408) 924-5628
Email: altovise.rogers@sjsu.edu
Office Hours: Mondays, 6:00 – 6:30 p.m., Wednesdays, 1:30 – 2:30 p.m.
Class Days/Time: Mondays & Wednesdays, 4:30 – 5:45 p.m.
Classroom: DMH 355
Prerequisites: Satisfaction of ELM requirements; 2 years of H. S. Algebra.
GE/SJSU Studies Category: B4 (Mathematical Concepts) and CAN STAT 2

Course Description
The course will specifically address 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. The course will also cover computer use in analysis and interpretation.

The major goal is to enable the student to use numerical and graphical data in personal and professional judgments and in coping with public issues. We also will consider other topics, including experimental and non-experimental research designs, causation, effect size and strength of association measures.

GE Requirements and Content
1. Stat 95 requires students to write a minimum of 500 words in a manner appropriate to quantitative analysis. The writing requirement will be met via team projects involving analysis of study data supplied by the instructor with SPSS. Writing will be assessed for grammar, clarity, conciseness, and coherence.
2. Stat 95 will incorporate issues of diversity in many ways (e.g., in lectures, assignments). Furthermore, this course encourages and is supportive of diversity of thought and of cultural backgrounds. It is important to have an environment
supportive of all individual differences of students to maximize the learning process.

3. In terms of Mathematical Concepts (GE Area B4), Stat 95 will focus on:
   a. Basic mathematical techniques for solving quantitative problems
   b. Elementary numerical computation
   c. The organization, classification, and representation of quantitative data in various forms, such as tables, graphs, rates, percentages, measures of central tendency and spread
   d. Applications of mathematics to everyday life
   e. Applications of mathematical concepts in statistical inference

Learning Outcomes

GE/SJSU Studies Learning Outcomes (LO)

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

1. To use statistical methods to solve quantitative problems, and those in verbal form (GELO1)
   - This objective is met through weekly homework assignments
2. To demonstrate the ability to use mathematics and statistics to solve real-life problems (GELO2)
   - This objective is met through weekly lectures, the SPSS writing assignments and in-class discussions
3. To arrive at conclusions based on numerical and graphical data. (GELO3) – SPSS Writing Assignment
   - This objective is met through weekly lectures, quizzes, the SPSS writing assignments and in-class discussions
4. (Specific to Area B4) To focus on basic mathematical techniques for solving quantitative problems and elementary numerical calculation (B4LO4)
   - This objective is met through in-class exercises
5. (Specific to Area B4) To focus on organization, classification, and representation of quantitative data in various forms (e.g., tables, graphs, percentages, measures of central tendency, and spread) (B4LO5)
   - This objective is met through weekly homework assignments and quizzes
6. (Specific to Area B4) To focus on applications of mathematics to everyday life (B4LO6)
   - This objective is met through in-class exercises and SPSS writing assignments

Course Learning Outcomes (CLOs)

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

1. Understand a wide array of statistical procedures and the problems for which they can be applied
   a. This objective is met through homework assignments and exams.
2. Communicate in verbal and written form basic concepts, assumptions and theories of the discipline
a. This objective is met through in-class exercises and SPSS writing assignments.

**Program Learning Outcomes (PLO)**

Upon successful completion of the psychology major requirements:

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.

**Required Texts/Readings and Materials**


2. *Top Hat Monocle Access*

**Definition of a Credit Hour**

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

The credit hour is defined as "the amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates" not less than:

1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester..."

2) a credit hour is assumed to be a 50-minute (not 60-minute) period.

**Other equipment / material requirements**

1. Calculator (must have square root and exponent buttons)
2. Scantron (882) forms
Classroom Protocol

Always bring your calculator to class. Do not talk, read, or eat during class. Please arrive to class on time and stay the entire time. Classes will comprise lectures, in-class activities, and question-and-answer periods. Attendance is expected and is critical for success in this course. If you miss a class, you are responsible for getting the information covered. It is vital that you complete all scheduled readings before each class.

Electronics and Recording of Class Sessions Policy

According to university policy, “common courtesy and professional behavior dictates that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. This permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”

To receive permission for recording the class, I would prefer if students would contact me in person during class or during office hours with their request beforehand. Please be aware that in classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.

"Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor-generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent."

Electronics Policy

Do not use cell phones, foreign language dictionaries, laptop computers, headphones, or any other electronic device during exams.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information regarding deadlines for add/drops are available at http://www.sjsu.edu/registrar/calendar/2144/index.html. Students should be aware of the current deadlines and penalties for adding and dropping classes.

Assignments and Grading Policy

Exams

The THREE exams are a significant source of points for this course. They will consist mainly of multiple choice and short-answer computational problems.
based on the objectives covered in the course. The exams will cover material from the designated chapters in the text and lectures.

Each examination will contain extra credit. Please bring #2 pencils, a calculator and a scantron (Form 882-ES) to each exam.

a. For exam problems, it is important to show all your work and the steps you underwent to arrive at your answer, so that you can receive at least partial or full credit.

b. For the exams, smartphones or cellphones will not be allowed for use for their calculator function; thus it behooves you to procure a hand-held calculator for this course.

Make-up Exams

No make-up exams will be given except in the case of extreme circumstances such as serious illness or accident or death in the family. Written proof from a physician will be required. Further documentation may be requested. To qualify for a make-up exam, I must be notified either prior to the exam (highly preferable) or within 24 hours of the scheduled test. When permission is granted, make-up exams must be completed within 6 days from the original test date at my convenience.

Writing Projects

The writing projects will be completed on teams assigned by the instructor involving the analysis of study data through SPSS statistics software. Writing will be assessed for grammar, clarity, and for understanding of concepts presented in course. The goal of the projects is to help you develop an understanding of not only how to provide computations but how to communicate the statistical procedures and concepts we discuss in the course.

Answers must be provided in sentence and/or paragraph format and should provide a description of what calculations or values you obtained from analyses mean in laymen’s terms.

The days considered to be Statistics Workshop Days will not include lecturing but will include time devoted for you to meet with your teams to complete these assignments.

The Psychology Department operates an SPSS-ready computer laboratory in DMH 350. Students can use the lab to complete SPSS-related assignments and to print their statistical results. The lab is staffed by graduate and undergraduate Student Assistants with experience in statistics and SPSS. If you do not prefer to sue the lab, students may also purchase SPSS from the University Help Desk in Clark Hall: [http://www.sjsu.edu/at/hd/](http://www.sjsu.edu/at/hd/)

Participation

One way in which your participation will be assessed in class is through involvement with ‘Top Hat Monocle’ which will be used for responding to
questions in the lectures. In order to receive credit you need to respond to at least two-three questions using this device, per week. You will not be graded for the correctness of your answers, only for participation.

The backbone of this in-class participation grading system will be the Top Hat Monocle CRS system, where the innovative use of technology will allow you to provide answers to questions, through a texting SMS or web-based system used to record and evaluate your answers to questions. All students are required to register on this web-based system.

Purchasing and usage information is available on the Canvas course page. Additionally, you will need a cell phone or some wi-fi enabled device to be able to submit answers. Subscription keys are available directly on the Top Hat Monocle website at http://www.tophatmonocle.com/register/

Homeworks and Quizzes
Homeworks and quizzes will be completed on-line. The homeworks require online submission of your solutions to select questions found at the end of every chapter in the textbook. A significant amount of time is provided for students to explore relevant material and possible solutions for homeworks and collaboration is encouraged. The homework assignments that will usually have a deadline of the Tuesday night (11:59pm) of the week following the presentation of given material.

Make-ups of homeworks will not be allowed; given that at the end of the course, I will drop the lowest two homework grades for the tabulation of the final course grade.

While collaboration is encouraged for homeworks, the quizzes are expected to be completed only on an individual basis and within a limited timeframe.

Course Website
A course website will be maintained using the SJSU learning management system, Canvas, at http://sjsu.instructure.com/

The website has the following key features:
1. Course materials – the syllabus, PowerPoint slides for lectures, and exam study guides (GELO 1)
2. Online quizzes – these are bi-weekly or monthly assessments (CLO1)
3. Homeworks – answers to each chapter's problems are to be submitted online weekly (CLO 2)
4. Discussion board – students can submit questions about lectures, materials, or problems (GELO 2)

Logging Into Canvas
Canvas Login URL: https://sjsu.instructure.com/. Please note that it should NOT have the "www" at the start of the URL like many other websites. All students and faculty must first set up their SJSUOne account before accessing Canvas. To do so, go to http://its.sjsu.edu/services/sjsuone/. The Username for Canvas then is your 9 digit SID or Employee ID and your PW is the one you chose when you established your SJSUOne account. You will see the courses you taking (assuming the instructor is using Canvas).

Further Assistance with Canvas
Students should go first to http://guides.instructure.com/m/4212 with problems and then to the University Help Desk for Canvas problems, including logging in (http://www.sjsu.edu/helpdesk/).

Grading
Your course grade is determined by the total number of points you accumulate for:

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>45% (CLO1, GELO1)</td>
</tr>
<tr>
<td>Online Quizzes</td>
<td>10% (GELO2, CLO1)</td>
</tr>
<tr>
<td>Class Participation</td>
<td>5% (PLO1, PLO2)</td>
</tr>
<tr>
<td>Homework</td>
<td>30% (GELO 1)</td>
</tr>
<tr>
<td>Writing Projects</td>
<td>10% (CLO2, PLO1)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Assessment of student learning outcomes
The learning objectives will be assessed via in-class, homework, quiz and exam questions. These assessment items will involve solving verbal and symbolic quantitative problems, including those that involve real-world situations. Students will be required to arrive at conclusions using numerical and graphical data.

University Policies

Academic integrity
Students should read and understand the University’s Academic Integrity policy, available at http://www.sjsu.edu/aec/about-us/policies-guidelines-regulations/Academic%20Dishonesty%20Policy%208.13.pdf

Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University’s integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development.
Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University.

**Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [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](http://www.sjsu.edu/aec) to establish a record of their disability.

In 2013, the Disability Resource Center changed its name to be known as the Accessible Education Center, to incorporate a philosophy of accessible education for students with disabilities. The new name change reflects the broad scope of attention and support to SJSU students with disabilities and the University's continued advocacy and commitment to increasing accessibility and inclusivity on campus.

**SJSU Policy on Final Exams**

Final examinations may be rescheduled:

1. If there are verifiable emergency circumstances; or
2. If a student has more than two exams scheduled within a 24-hour period. In this case, the student may request an alternative exam date from any one of the instructors at least three weeks prior to the last class meeting.
3. In either case, if an alternate exam date and time during the regular final exam period cannot be arranged between the student and instructor, the rescheduled exam will be taken during the final exam-makeup period. If students and instructors are unable to reach agreement to reschedule, the Provost's office will negotiate an appropriate solution.

## Course Schedule

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 25</td>
<td>Class Introduction</td>
<td>M</td>
</tr>
<tr>
<td>Aug 27</td>
<td>Introduction to Statistics</td>
<td>W</td>
</tr>
<tr>
<td>Sep 1</td>
<td>Veteran’s Day – CAMPUS CLOSED</td>
<td>M</td>
</tr>
<tr>
<td>Sep 3</td>
<td>Frequency Distributions</td>
<td>W</td>
</tr>
<tr>
<td>Sep 8</td>
<td>Central Tendency</td>
<td>M</td>
</tr>
<tr>
<td>Sep 10</td>
<td>Central Tendency</td>
<td>W</td>
</tr>
<tr>
<td>Sep 15</td>
<td>Variability</td>
<td>M</td>
</tr>
<tr>
<td>Sep 17</td>
<td>Variability</td>
<td>W</td>
</tr>
<tr>
<td>Sep 22</td>
<td>Z-Scores</td>
<td>M</td>
</tr>
<tr>
<td>Sep 24</td>
<td>Z-Scores</td>
<td>W</td>
</tr>
<tr>
<td>Sep 29</td>
<td>Exam Review</td>
<td>M</td>
</tr>
<tr>
<td>Oct 1</td>
<td>EXAM 1</td>
<td>W</td>
</tr>
<tr>
<td>Oct 6</td>
<td>Probability</td>
<td>M</td>
</tr>
<tr>
<td>Oct 8</td>
<td>Statistics Workshop Day</td>
<td>W</td>
</tr>
<tr>
<td>Oct 13</td>
<td>Probability and Samples</td>
<td>M</td>
</tr>
<tr>
<td>Oct 15</td>
<td>Probability and Samples [Project1 DEADLINE]</td>
<td>W</td>
</tr>
<tr>
<td>Oct 20</td>
<td>Introduction to Hypothesis Testing</td>
<td>M</td>
</tr>
<tr>
<td>Oct 22</td>
<td>Introduction to Hypothesis Testing</td>
<td>W</td>
</tr>
<tr>
<td>Oct 27</td>
<td>Introduction to the T Statistic</td>
<td>M</td>
</tr>
<tr>
<td>Oct 29</td>
<td>Introduction to the T Statistic</td>
<td>W</td>
</tr>
<tr>
<td>Nov 3</td>
<td>Independent Samples T – Test</td>
<td>M</td>
</tr>
<tr>
<td>Nov 5</td>
<td>Exam Review</td>
<td>W</td>
</tr>
<tr>
<td>Nov 10</td>
<td>EXAM 2</td>
<td>M</td>
</tr>
<tr>
<td>Nov 12</td>
<td>Independent Samples T – Test</td>
<td>W</td>
</tr>
<tr>
<td>Nov 17</td>
<td>Related Samples T – Test</td>
<td>M</td>
</tr>
<tr>
<td>Nov 19</td>
<td>Related Samples T – Test</td>
<td>W</td>
</tr>
<tr>
<td>Nov 24</td>
<td>Statistics Workshop Day</td>
<td>M</td>
</tr>
<tr>
<td>Nov 26</td>
<td>Analysis of Variance</td>
<td>W</td>
</tr>
<tr>
<td>Dec 1</td>
<td>Analysis of Variance - Post-hoc tests</td>
<td>M</td>
</tr>
<tr>
<td>Dec 3</td>
<td>Correlation [Project2 DEADLINE]</td>
<td>W</td>
</tr>
<tr>
<td>Dec 8</td>
<td>Correlation</td>
<td>M</td>
</tr>
</tbody>
</table>
| Dec 17  | FINAL EXAM                                                          | W   | 2:45- 5:00 pm

**Note. The instructor reserves the right to alter the course schedule at her discretion. The timing and specific nature of topics and activities may change.**