San José State University  
Psychology Department  
23580, Elementary Statistics, Section 03, SPRING 2017

Instructor: Steven Macramalla
Office Location: DMH 230
Telephone: (831) 234-8451
Email: steven.macramalla@sjsu.edu
Office Hours: MonTuWeTh 13:30PM - 3:00PM
Class Days/Time: TuTh 3:00PM - 4:15PM
Classroom: Washington Square Hall 207

Faculty Web Page and MYSJSU Messaging (Optional)
Copies of the course materials such as the syllabus, major assignment handouts, etc. may be found on Canvas as well as on my faculty web page at http://www.sjsu.edu/people/firstname.lastname or accessible through the Quick Links>Faculty Web Page links on the SJSU home page. You are responsible for regularly checking with the messaging system through MySJSU and for checking your email and Canvas account for announcements.

Prerequisites
"By California State University policy, passage of the Entry Level Mathematics (ELM) is prerequisite to enrollment in this class. Failure to satisfy this prerequisite will result in retroactive assignment of a "U" grade in the course. Information on the ELM is printed in the Testing Section in the front of the Schedule of Classes." Intermediate College Algebra is a prerequisite for this course.

Course Description
This course is designed to provide an overview of elementary statistical procedures used by researchers in the behavioral and social sciences and to prepare students for more advanced statistical techniques presented in other courses.

Course Goals and Student Learning Objectives
Upon successful completion of this course, you will be able to:
1 CLO1 – Use statistical methods to solve quantitative problems, including those presented in verbal form
2 CLO2 – Demonstrate the ability to use mathematics and statistics to solve real-life problems
3 CLO3 – Arrive at conclusions based on numerical and graphical data.

Goal 1. Knowledge Base of Statistics: Students will demonstrate familiarity with the major concepts in statistics.
Goal 2. Application of Statistical Concepts: Students will be able to solve mathematical problems including those presented in verbal form.
Goal 3. Critical Thinking Skills: Students will develop the ability to arrive at descriptive and inferential conclusions on the basis of mathematical data presented through such forms as statistics, tables, graphs, and computer outputs.
Goal 5. Values in Psychology: Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Learning Objective 1 (GELO1): Use mathematical methods to solve quantitative problems, including those presented in verbal form.
Learning Objective 2 (GELO2): Demonstrate the ability to use mathematics to solve real life problems.
Learning Objective 3 (GELO3): Arrive at conclusions based on numerical and graphical data.
Learning Objective 4 (Specific to Area B4): Use basic mathematical techniques for solving quantitative problems and elementary numerical calculation
Learning Objective 5 (Specific to Area B4): Understand 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): Apply mathematics to everyday life
Learning Objective 7 (Specific to Area B4): Apply mathematical concepts to statistical inference

Required Texts/Readings

Essentials of Statistics for the Behavioral Science by Nolan & Heinzen

The Lady Tasting Tea: How Statistics Revolutionized Science in the twentieth Century by David Salsburg
ISBN0-8050-7134-2 paperback
NOT AVAILABLE AT BOOKSTORE? order from AMAZON.COM or other bookstore.

iClicker & Reef: This is an interactive in-class online survey tool for tallying responses to questions, quizzes or surveys. As this is my first time using this, it will not count for credit.

Textbooks in stats are not an option, you will be using them for assignments and you will require photocopies of the appendices for the exams. The department has available a computer lab with SPSS (Statistical Package for the Social Sciences) software, which can
be used to do exercises in the book which involve SPSS. The book also makes use of Excel functions. We will do some of the exercises involving both programs in class. There will be required assignments involving Excel and SPSS, and especially if you are interested in research as a career, it will be in your interest to have access to these programs. SPSS is available for download through MySJSU, and Excel is available in Sheets on Google.

Class Website: http://www.sjsu.edu/people/steven.macramalla/courses/c2/

Classroom Protocol

All students are expected to display professionalism and respect for others. This explicitly includes arriving on time, participating in class, engaging in civil dialog, and paying attention to classroom activities.

Aside from Top Hat, please turn off your cell phones and refrain from activities that disrupt the class. If you have to arrive late, seat yourself quietly and near the door. If you have to leave early, be sure to let me know in advance and sit by the door.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester’s Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic calendar web page located at http://www.sjsu.edu/academic_programs/calendars/academic_calendar/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

Assignments and Grading Policy

Exams 3 x 40 points ……………120 pts
Assignments 3 x 20 points………60 pts
Total…………………………..180 pts

Assignments

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 exercises 6-12 in Assignment 1, 17-19 in Assignment #2, and 2-4 in Assignment #3.

3 Assignments

- You will need to use Excel and SPSS for assignments
- Due Dates: Exam Days. See Syllabus Below.
- Hybrid-Pass /No – Pass: scores of 20 – 10 – 0
  - 20 = ALL WORK DONE (most people get this)
  - 10 = ONE exercise is INCOMPLETE. (a few get this)
0 = MORE THAN ONE EXERCISE IS INCOMPLETE with obviously poor effort. (minority usually get this)

Late homework will be penalized for tardiness. You may work in groups but outright copying will not be tolerated. The homework is designed to assist you in understanding the material and providing much needed practical experience in grasping otherwise abstract concepts. They will be graded on a Hybrid pass/No Pass basis.

**HARD COPIES of Assignments are due on the DAY OF THE EXAM**
(Assignment #1 on day of Exam 1, etc.)

**Exams**
There will be two in-class exams and one final exam. The exams are not cumulative, but the concepts build over time.
The exams will require a calculator, scantron, cheat sheet of formulas, and photocopies of the tables in Appendix B.

The exams will be a combination of multiple choice answers and problem which will require you to show your work, to demonstrate you understand the concepts.

The exercises in the Assignments will provide practical problems which incorporate use of statistical concepts, however, be advised! the exam will emphasize conceptual understanding, this means knowing definitions and how the concepts interact – the assignment problems are a step towards the goal grasping key concepts.

There are extra problems at the end of each chapter with answers in the book for more practice!

**There are extra problems at the end of each chapter with answers in the book for more practice!**
The final exam is **FINAL EXAM Thursday, May 18, 1445-1700**, there will be NO opportunity to take the exam at another time. **PLAN IN ADVANCE TO BE THERE.**

**Course Grading Scale (% of Total Points):**
- A+ 95-100%
- A 90-94%
- A- 83-89%
- B+ 79-82%
- B 75-78%
- B- 70-74%
- C+ 67-69%
- C 63-66%
- C- 60-62%
- D+ 57-59%
- D 52-56%
- D- 50-51%
- F<50%

**University Policies**

**Academic integrity**
Students should know that the University’s Academic Integrity Policy is available at http://sa.sjsu.edu/judicial_affairs/faculty_and_staff/academic_integrity/index.html. 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. The Student Conduct and Ethical Development website is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.

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. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors.

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 requires that students with disabilities requesting accommodations must register with the Disability Resource Center (DRC) at http://www.drc.sjsu.edu/ to establish a record of their disability.

Learning Assistance Resource Center (Optional)

The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. The LARC website is located at http://www.sjsu.edu/larc/.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Assignments, Deadlines</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan 26</td>
<td>Welcome &amp; Logistics Introduction: Types of Stats, Data, Variables&lt;br&gt;Chapter 1&lt;br&gt;Lady Tasting Tea. Chapter 1</td>
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<td>2</td>
<td>Jan 31-Feb 2</td>
<td>Frequency Distributions &amp; How to Lie with Graphs &amp; Central Tendency and Variability&lt;br&gt;&lt;b&gt;BRING BAG OF CHOCOLATE CHIP COOKIES&lt;/b&gt;&lt;br&gt;Chapter 2 &amp; Chapter 4 (Chapter 3 is nice, too)&lt;br&gt;Lady Tasting Tea Chapter 2</td>
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<td>3</td>
<td>Feb 7-9</td>
<td>Standardization, Z-scores, &amp; Probability, Randomization&lt;br&gt;Ch. 5 &amp; 6; Lady Tasting Tea Chapter 3 &amp; 4 &amp; 5&lt;br&gt;&lt;b&gt;BRING 2 DICE&lt;/b&gt;</td>
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<td>4</td>
<td>Feb 14-16</td>
<td>Central Limit Theorem&lt;br&gt;Ch. 5 &amp; 6 Con’t</td>
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<td>5</td>
<td>Feb 21-23</td>
<td>Hypothesis Testing with Z-scores Null &amp; Research Hypotheses, Type I &amp; II Errors, Chapter 7</td>
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<td>6</td>
<td>Feb 28- March 1</td>
<td>EXAM 1 &amp; ASSIGNMENT #1 DUE&lt;br&gt;Confidence Intervals, Effect Size &amp; Power&lt;br&gt;Chapter 8</td>
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<td>7</td>
<td>March 7-9</td>
<td>Confidence Intervals, Effect Size &amp; Power Con’t&lt;br&gt;Chapter 8</td>
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<td>8</td>
<td>March 14-16</td>
<td>Single Sample &amp; Paired Sample t-Tests&lt;br&gt;Chapter 9</td>
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<td>9</td>
<td>March 21-23</td>
<td>Single Sample &amp; Paired Sample t-Tests Con’t&lt;br&gt;Chapter 9</td>
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<td>10</td>
<td>March 28-30</td>
<td>SPRING BREAK</td>
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<td>11</td>
<td>April 4-6</td>
<td>EXAM 2 &amp; ASSIGNMENT #2 DUE</td>
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<td>12</td>
<td>April 11-13</td>
<td>Independent t-Test&lt;br&gt;Chapter 10</td>
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<td>13</td>
<td>April 18-20</td>
<td>Correlation &amp; Regression&lt;br&gt;Chapter 13 &amp; 14</td>
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<td>14</td>
<td>April 25-27</td>
<td>ANOVA One-Way&lt;br&gt;Chapter 11</td>
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<td>15</td>
<td>May 2-4</td>
<td>ANOVA Two-Way&lt;br&gt;Chapter 12</td>
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<td>16</td>
<td>May 9-11</td>
<td>Chi-Square&lt;br&gt;Chapter 15</td>
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<td>17</td>
<td>May 16</td>
<td>Review</td>
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<td>Week</td>
<td>Date</td>
<td>Topics, Readings, Assignments, Deadlines</td>
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<tr>
<td>Final Exam</td>
<td>FINAL EXAM Thursday, May 18, 1445-1700</td>
<td>ASSIGNMENT #3 DUE</td>
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