Course and Contact Information

Instructor: Liz Keneski, M.A., Ph.D.(c)
Office Location: DMH 232
Telephone: 408-924-6607
Email: elizabeth.keneski@sjsu.edu
Office Hours: Wednesdays 5-6pm; by appointment
Class Days/Time: Wednesdays 6-8:45pm
Classroom: DMH 355
Prerequisites: Passing Entry Level Mathematics (ELM);
2 years of high school algebra

GE/SJSU Studies Category: B4 (Mathematical Concepts)

Course Overview

This course is a sampler platter of the world of statistics. Despite any preconceived notions you may have about statistics or this course, you will learn a key life skill—how to evaluate information in order to make better decisions based on science and numbers rather than chance. I will do everything I can to make the material interesting and applicable to your other coursework and to your life, and I hope you will put your best effort into learning and into effectively engaging with the material. Welcome!

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. GE Area: B4. Prerequisite: Satisfaction of ELM requirement and two years of high school algebra. 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.

Course Format

In-person course with emphasis on computer use. Internet and computer access will be needed on a regular basis throughout this course (see below about your use of the Statistics Laboratory). See University Policy F13-2 at http://www.sjsu.edu/senate/docs/F13-2.pdf for more details.
Learning Outcomes and Course Goals

GE Learning Outcomes (GELO)

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

1. 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.

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

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

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

5. 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).

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

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

Other Course Requirements

Students must write at least 500 words on topics relevant to data analysis. Stats 95 will also incorporate issues of diversity. Finally, students must learn to use the SPSS statistical program to conduct statistical analyses.

Course Learning Outcomes (CLO)

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

- Identify a variety of research methods and study designs
- Operationalize and assess variables
- Create and interpret a frequency distribution
- Calculate and interpret measures of central tendency
- Conduct a dependent and an independent t-test
- Calculate and interpret a correlation
- Conduct and interpret an ANOVA
- Conduct and interpret a regression
o Decide which statistical tests are appropriate for a given set of data

Program Learning Outcomes (PLO)

Upon successful completion of the psychology major requirements…

1. 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.

2. 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.

3. 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.

4. PLO4 – Application of Psychology – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

5. 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

ISBN-10: 1111835764

Where to buy: SJSU bookstore; e-book available on Amazon.com starting at $48.65

Other Readings
Any supplemental readings will be provided by Liz.

Other equipment / material requirements
A calculator may be helpful—a free online calculator will work fine.

Internet and computer access on a regular basis

Course Requirements and Assignments
SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu senate/docs/S12-3.pdf.
**Required Readings**

The schedule for reading assignments is on the last page of this syllabus. In order to do well in this class, it is recommended that you do the required readings prior to the class in which the material is discussed. Reading before class will increase your ability to discover those areas which you don’t understand, to ask meaningful questions, to incorporate knowledge into what you already know (and thus, to do well on the exams), and to participate in meaningful class discussions. To reward good reading habits, short quizzes will be given at the beginning of class periodically throughout the semester. The quizzes are designed simply to check your comprehension of the material (and thus are relatively easy if you have done the reading). By encouraging you to keep up with the readings, the quizzes can help boost your grade and also reduce the amount of time needed to study for the exams. Note that you must attend class and be on time to take a quiz, as there are no make-up quizzes; I will allow you to drop your lowest quiz grade, so if you are late or absent on the day of a quiz, that will count as your dropped quiz. *My advice:* I highly suggest you read each of the assigned chapters at least twice—once before I lecture on that topic in class and once afterwards.

**Attendance and Participation**

According to University policy F69-24, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class.”

Class meetings will involve lectures, demonstrations, video clips and hands-on learning activities; questions and discussion during class are strongly encouraged. I will always try to make lectures engaging, interesting, and fun. I will also make every effort to help you learn and understand the material. If you feel lost at any point in the semester, come see me as soon as possible – I am here to help! Attendance is absolutely crucial to your success. There is a lot of information to be covered, and the concepts overlap and build on each other. As a result, it is likely that if you miss one or more lectures, you may be lost for several subsequent classes. Furthermore, much of the course content will be difficult to understand simply from other students’ notes. So, please put forth your best effort to attend every class meeting and to be on time. In order for an absence to be excused, you must email me before class begins telling me why you will not be in class. University-sponsored events (e.g., athletic trips) as well as the observation of religious holidays will be honored as excused absences as long as I am notified in writing at least two weeks in advance. I will then work with you to make-up work you may have missed. Please see the University’s policies on these types of absences if you have questions, and come talk to me. Missed work resulting from unexcused absences cannot be made up.

In order to encourage class participation, you will be awarded up to 50 points for participating in discussions and activities. If you actively listen in class, ask questions when you genuinely have them, and generally provide comments and insights when we open up the class for discussion, you will receive all 50 points. For each time noted by Liz that you do not listen, do not speak at all during class, ask inappropriate questions or make inappropriate comments, or are using your phone or computer excessively for activities not related to class, you will be deducted 2-5 points for each of these occurrences.

**Exams**

There will be two exams. Both exams may consist of a mixture of multiple choice, fill-in-the-blank, and short answer questions. The exams will cover everything discussed in class (including lectures, films, and exercises) as well as the assigned chapters. Since it is impossible to cover all the material in the textbook in class, you will also be tested on material that is only in your text— I will clue you into the material you need to focus on from the textbook before each exam. To do well on the exams, you must truly understand and be able to distinguish
among all the various concepts and theories, in addition to applying the concepts. In short, exams focus on conceptual issues rather than memorization. [Hint: It's a good idea to put extra effort into the first exam until you know what to expect.] Exams will be given on the following dates:

- Exam 1: Wednesday, March 23rd (Chapters 1 - 11)
- Exam 2: Wednesday, May 18th (Chapters 12 - 19)

**Exam Make-up Policy**

Make-up exams will be granted only under exceptional circumstances, such as serious illness or a death in your family. To be eligible for a makeup, you must adhere to the following two conditions: (1) Notify me prior to the exam that you cannot make it (i.e., talk to me personally, or call and leave a detailed message on my voice mail) and (2) Provide official documentation of your emergency (e.g., a note from the academic dean or a written medical excuse signed by a physician).

The only reason Exam 2 can be rescheduled is if you have three final exams in one day, and then I will, of course, make other arrangements for you.

**Me Search Project**

In order to make the material in this course most relevant to each of you personally, you will demonstrate your knowledge of the concepts you learn by completing a semester-long project about a topic in your life of your choosing. You will observe yourself or assess yourself in some way (e.g., monitor how often you exercise and what your resulting mood is like for a week, see how the average time you spend with your friends this semester influences your study habits), collect data about yourself, analyze that data, and interpret that data in a final, brief paper. Find deadlines for each portion of the project on the last page of this syllabus. More specific instructions and grading rubrics about each part of this assignment will be provided throughout the semester.

**Statistics Laboratory**

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. All Stats 95 students are welcome to use the Statistics Lab to complete any SPSS-based assignment. 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/)

**Grading Policy**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (2)</td>
<td>100 pts ea; 200 pts</td>
<td>29%</td>
</tr>
<tr>
<td>Quizzes (11, drop lowest)</td>
<td>10 pts ea; 100 pts</td>
<td>14%</td>
</tr>
<tr>
<td>Homework (9, drop lowest)</td>
<td>8 x 25 = 200 pts</td>
<td>29%</td>
</tr>
<tr>
<td>Me Search Project</td>
<td>150 pts</td>
<td>21%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>50 pts</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>700 pts</td>
<td>100%</td>
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Course grades will be based on the percentage of total points and will be assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Score</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
</tr>
<tr>
<td>A</td>
<td>93-96</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
</tr>
<tr>
<td>D+</td>
<td>67-69</td>
</tr>
<tr>
<td>D</td>
<td>63-66</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>D-</td>
<td>60-62</td>
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</tbody>
</table>
Extra credit opportunities will be provided a few times during the semester as useful activities or current events that apply to the course material arise. The total amount of extra credit points offered will not exceed the points necessary to raise your grade (i.e., you will not be able to move from an A to an A+ solely by completing extra credit, but it may help boost you to the next highest grade if you are already close).

Late homework assignments will not be accepted. Late Me Search project assignments will be accepted with a 5-point per weekday penalty (and a 5-point per weekend penalty).

Note: “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 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.

Classroom Protocol

Students are expected to treat this course as they would a job. This means you are to attend all classes unless unable due to a reasonable conflict, and let Liz know if you won’t be attending, and to arrive on time unless unable due to a reasonable conflict and let Liz know if you’ll be late. Further, you should be attentive during class (cell phones and computers are not prohibited, but should not be used in excess), respectful and courteous of Liz and of your fellow students at all times, and, above all else, contribute to maintaining a safe and stimulating learning environment for all of us.

Canvas & MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas learning management system course website. You are responsible for regularly checking with the messaging system through MySJSU and your email to learn of any updates.

Email Communication

I will often communicate to the class by sending an email to your SJSU account. Please be sure to check that account weekly (you can forward your SJSU email to another account if you so desire). Always CC yourself on an email you send to me or to classmates so that you will have proof that the email was sent. This protects you in the event that I, for some reason, do not receive your correspondence. Finally, please be respectful and clear in your email communications (i.e., always use a greeting, full sentences with punctuation, and politeness). I promise to always do the same in my emails to you.

University Policies

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. See University Policy S90–5 at http://www.sjsu.edu/senate/docs/S90-5.pdf. More detailed information on a variety of related topics is available in the SJSU catalog at http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not serve to address the issue, it is recommended that the student contact the Department Chair as a next step.
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 year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. 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/.

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, at http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course.

Common courtesy and professional behavior dictate 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. Such 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. Please ask me in person or via email if you wish to record a course. 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.

Academic Integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. 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 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.sjsu.edu/studentconduct/. Please find a definition of plagiarism on the website of the Office of Student Conduct and Ethical Development at http://www.sjsu.edu/studentconduct/.

If you would like to include in your paper any material you have submitted, or plan to submit, for another class, please note that SJSU’s Academic Integrity policy F06-1 requires approval by instructors.

I feel very strongly about academic dishonesty—it will not be tolerated. If you have any questions about whether or not you are acting with academic integrity, never hesitate to ask me. Below are some exams of academic dishonesty that may apply to our course:

- **Exams & Quizzes:** I consider it academically dishonest to remove exams from the exam room or copy questions/answers at any time. On all exams, you are not allowed to use notes, books, phones, or friends that sit by you.
- **Plagiarism:** Plagiarism involves the use of another person’s work, words, or ideas without properly crediting them. Although this certainly applies to submitting a paper that others have written or directly quoting a source without citing the original author, it also involves using another person’s ideas without giving them credit. If a sentence is not followed by a citation, it means the idea is yours and yours alone. It is also plagiarism to change only a few words in another author’s sentence (even if the author is cited). We will review this concept more closely in class.
• **Collaboration with fellow students:** Working together is allowed on in-class activities and assignments, but NOT allowed on papers, homework assignments, or, of course, exams.

**Student Accommodations**

I am very sensitive to the needs of students with disabilities. Students who think they may need accommodations in this course because of the impact of a disability are encouraged to meet with me privately *early* in the semester. All discussions will remain confidential.

**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) (AEC) at [http://www.sjsu.edu/aec](http://www.sjsu.edu/aec) to establish a record of their disability.

**Accommodation to Students' Religious Holidays**

San José State University 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. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See [University Policy S14-7](http://www.sjsu.edu/senate/docs/S14-7.pdf).

**Student Technology Resources**

Computer labs for student use are available in the [Academic Success Center](http://www.sjsu.edu/at/asc) located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

**SJSU Peer Connections**

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).
Peer Connections 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**

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook.

**SJSU Counseling Services**

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling Services website at http://www.sjsu.edu/counseling.
## STATS 95—Elementary Statistics, Spring 2016, Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Assignments, Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2/3/16</td>
<td>Introduction to Research &amp; Statistics: Chapter 1</td>
</tr>
<tr>
<td>2</td>
<td>2/10/16</td>
<td>Measurement, Descriptives, &amp; Frequency Distributions: Chapter 2; Me-Search Idea DUE</td>
</tr>
<tr>
<td>3</td>
<td>2/17/16</td>
<td>Central Tendencies &amp; Variability: Chapters 3 &amp; 4; Homework 1 DUE—SPSS Frequency Distribution assignment</td>
</tr>
<tr>
<td>4</td>
<td>2/24/16</td>
<td>Z-Scores: Chapter 5; Homework 2 DUE</td>
</tr>
<tr>
<td>5</td>
<td>3/2/16</td>
<td>Probability: Chapters 6 &amp; 7; Me-Search Summary Stats DUE</td>
</tr>
<tr>
<td>6</td>
<td>3/9/16</td>
<td>Hypothesis Testing: Chapter 8; Homework 3 DUE</td>
</tr>
<tr>
<td>7</td>
<td>3/16/16</td>
<td>Intro to T-Statistic: Chapter 9; Homework 4 DUE</td>
</tr>
<tr>
<td>8</td>
<td>3/23/16</td>
<td>T-Tests: Chapters 10 &amp; 11; Exam 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spring Break!</td>
</tr>
<tr>
<td>9</td>
<td>4/6/16</td>
<td>ANOVAs: Chapter 12; Homework 5 DUE—SPSS T-test assignment</td>
</tr>
<tr>
<td>10</td>
<td>4/13/16</td>
<td>ANOVAs: Chapters 13 &amp; 14; Homework 6 DUE</td>
</tr>
<tr>
<td>11</td>
<td>4/20/16</td>
<td>Correlation: Chapter 15; Homework 7 DUE—SPSS ANOVA assignment</td>
</tr>
<tr>
<td>12</td>
<td>4/27/16</td>
<td>Regression: Chapter 16; Me-Search Analyses Plan DUE</td>
</tr>
<tr>
<td>13</td>
<td>5/4/16</td>
<td>Chi Square &amp; Binomial Test: Chapters 17 &amp; 18; Homework 8 DUE—SPSS Correlation/Regression assignment</td>
</tr>
<tr>
<td>14</td>
<td>5/11/16</td>
<td>Choosing the Right Statistics: Chapter 19; Homework 9 DUE—SPSS Chi Square assignment</td>
</tr>
<tr>
<td>Final Exam</td>
<td>5/18/16</td>
<td>Exam 2: 5:15-7:30pm Final Me-Search Project DUE</td>
</tr>
</tbody>
</table>

*Note: Schedule subject to change with 2 weeks advanced notice to students.*