San José State University
Department of Psychology

Statistics 095
Elementary Statistics Section 01
Summer 2011

Instructor: Dr. Megumi Hosoda
Office Location: DMH Room 315
Telephone: (408) 924-5637
Email: Megumi.Hosoda@sjsu.edu
Office Hours: Mon & Wed 11:00 – 12:00 pm and 5:00-5:30p.m. or by appointment
Class Days/Time: M W 1:00 – 5:00 pm
Classroom: CL117
Prerequisites: Satisfaction of ELM requirements; 2 years of HS algebra
GE/SJSU Studies B4 (Mathematical Concepts) and CAN STAT 2
Category:

Course Webpage
The syllabus will be posted at http://www.sjsu.edu/psych/Syllabus/Stat095/.
Copies of the course materials such as the syllabus, homework assignments, tables, etc. will be found on my faculty web page accessible through the Faculty Web Page links on the SJSU home page. Please visit http://www.sjsu.edu/people/megumi.hosoda/.

Course Description
This course fulfills a General Education requirement for the B4 (Mathematical Concepts). The major goal of GE is to enable the student to use numerical and graphical data in personal and professional judgments and in coping with public issues. The major purpose of this course is to provide you with a solid foundation in elementary statistics, by introducing you to the various types of statistics used in psychology and other social sciences. In this course, you will learn the “what, when, and how” of statistics. That is, you will learn what statistics are available, when to use specific statistics, and how to interpret results.
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 homework assignments (i.e., write results and interpret them). Writing will be assessed for grammar, clarity, conciseness, and coherence. If you need writing help, please visit the LARC in the SSA or the Writing Center in Clark Hall 126 (http://www.sjsu.edu/writingcenter/).
2. Stat 95 will incorporate issues of diversity in many ways (e.g., in lectures, assignments).
3. In terms of Mathematical Concepts (GE Area B4), Stat95 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
   d. applications of mathematics to everyday life, and
   e. applications of mathematical concepts in statistical inference

GE/SJSU Studies Learning Outcomes (LO)
Upon successful completion of this course, students will be able to:
1. use statistical methods to solve quantitative problems, including those presented in verbal form
2. demonstrate the ability to use mathematics and statistics to solve real-life problems and
3. arrive at conclusions based on numerical and graphical data.

Required Texts/Readings
Textbook

Other material requirements
You will need a calculator. It does not need to be a scientific one but has to have the square root button. You will also need four SCANTRON FORM NO.882-E sheets for examinations.

Classroom Protocol
Classes
In order to get the most out of the lectures, you should read the assigned material prior to the lecture (see Tentative Schedule). If you have not read the textbook, you may have difficulty following lectures. Furthermore, the textbook (at the end of each chapter) has exercises that you can practice with. In addition to homework assignments, you should work as many exercises as you could to make sure that you understand. You cannot possibly learn statistics without doing statistics, and doing statistic means working out problems. The material in the course is cumulative and it becomes more complex as the semester progresses. If you miss several lectures, it will become extremely difficult for you to catch up with class. Thus, it is very crucial that you attend all of the class periods. Please bring your text and calculator to class all the time.
In an effort to create a classroom environment conducive to learning, I expect you to follow the following classroom etiquette:

1. Be polite and respectful to other people in the class.
2. Do not talk when your instructor is speaking or when other students are asking questions.
3. Do not work on any other course material during class, including studying for other exams.
4. If you must arrive late or leave early, please do so quietly and with a minimum of distraction.

**Electronics Policy**
Do not use cell phones, foreign language dictionaries, laptop computers, headphones, or any other electronic device during Exams. Turn off all pagers, cell phones, headphones, etc. before class. Using cell phones and other communication methods (e.g., text messaging) during class is not allowed. Do not use electronic devices to check email, visit websites, play games, or send instant messages. Doing so is a distraction to other students and the instructor and will result in expulsion from class.

**Dropping and Adding**
Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on add/drops are available at [http://info.sjsu.edu/web-dbgen/narrsoc-fall/rec-298.html](http://info.sjsu.edu/web-dbgen/narrsoc-fall/rec-298.html). Information about late drop is available at [http://www.sjsu.edu/sac/advising/latedrops/policy/](http://www.sjsu.edu/sac/advising/latedrops/policy/). Students should be aware of the current deadlines and penalties for adding and dropping classes.

**Assignments and Grading Policy**
Your letter grade for this course will be based on a total score obtained from exams and homework assignments (a total point might change due to a change in schedule) and will be assigned based on the following grading distribution.

<table>
<thead>
<tr>
<th></th>
<th>400 pts (39%)</th>
<th>260 pts (36%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Point Possible</strong></td>
<td>660 (tentative)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>&gt; 647</td>
<td>98%</td>
</tr>
<tr>
<td>A</td>
<td>614–646</td>
<td>93%</td>
</tr>
<tr>
<td>A-</td>
<td>594–613</td>
<td>90%</td>
</tr>
<tr>
<td>B+</td>
<td>580–593</td>
<td>88%</td>
</tr>
<tr>
<td>B</td>
<td>548–579</td>
<td>83%</td>
</tr>
<tr>
<td>B-</td>
<td>528–547</td>
<td>80%</td>
</tr>
<tr>
<td>C+</td>
<td>515–527</td>
<td>78%</td>
</tr>
<tr>
<td>C</td>
<td>482–514</td>
<td>73%</td>
</tr>
<tr>
<td>C-</td>
<td>462–481</td>
<td>70%</td>
</tr>
<tr>
<td>D+</td>
<td>449–461</td>
<td>68%</td>
</tr>
<tr>
<td>D</td>
<td>416–448</td>
<td>63%</td>
</tr>
<tr>
<td>D-</td>
<td>396–415</td>
<td>60%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 395</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>
Examinations (400 pts tentative)
There will be four examinations. Each exam will consist of multiple choice, short answer, and computational questions. Exam questions will be drawn from both the textbook and lectures. Please bring pencils, an eraser, a calculator, and a scantron (No. 882-E) to each exam.

In order for the evaluation process to be fair to every student in the course, it is important to make sure that the conditions of evaluation are as uniform as possible for everyone. This kind of uniformity simply cannot be achieved if some students take the exams on days other than those when the exam is given to the rest of the class. Just the fact that some students would have more time to study for the exam than do those students who take the exam as scheduled is simply unfair.

Therefore, in the interest of maximizing uniformity for evaluation conditions, in fairness to all students in the class who take their exams as scheduled, the following policy will be implemented without exception (i.e., is non-negotiable).

Make-up exams (without a penalty) will be given only under the most extraordinary circumstances, upon approval by your instructor of a typewritten petition with convincingly official supporting documentation attached (e.g., letter from a medical doctor testifying that the student was incapable of attending class to take the exam).

Without your instructor’s approval of a petition as described above, makeup exams will be given with a substantial penalty (30% reduction of the possible highest score). This means that even if you answer all of the questions correctly on the exam, your score can never be higher than 70% of the total possible points (i.e., the highest score you would receive is a C-).

Homework Assignments (260 pts tentative)
There will be a total of 13 homework assignments (i.e., an assignment for every chapter we cover). A late homework assignment will be accepted with a substantial penalty (20% reduction of the total possible points). This means that even if you answer all of the questions correctly, your score can never be higher than 20% of the total possible points (i.e., the highest score you would receive is a B-). Obviously, handing in a late homework assignment will hurt your grade in the end. Thus, I encourage you to turn each homework assignment in on the scheduled due date or the scheduled exam date.

At my discretion, you could be asked to redo a homework assignment. However, keep in mind that this really occurs. Again, the highest possible score on the redone assignment will be 90% of the total possible points (10% reduction of the total possible points).

Any homework assignments sent via email will not be accepted.

Assessment of student learning outcomes
The learning objectives will be assessed via homework assignments and exam questions. These assessment items will involve solving verbal and symbolic quantitative problems. Students will be required to arrive at conclusions using numerical and graphical data. For
example, students may view a scatterplot depicting data for the amount of caffeine consumed (X) and the quality of sleep (Y) and will determine whether a relationship exists between these variables, and, if so, the nature and strength of this relationship (LO 3). In addition, students will compute appropriate statistical measures that describe the relationship (LO 1) and then determine the practical implications of the observed relationship (LO 2, 3).

**University Policies**

**Academic integrity**

Students should know that the University’s [Academic Integrity Policy is available at http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.pdf](http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.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. The website for Student Conduct and Ethical Development is available at [http://www.sa.sjsu.edu/judicial_affairs/index.html](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 DRC (Disability Resource Center) to establish a record of their disability.

**Learning Assistance Resource Center**

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/](http://www.sjsu.edu/larc/).

**SUSU Writing Center**

The SJSU Writing Center (Room 126 in Clark Hall) is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well
trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at [http://www.sjsu.edu/writingcenter/about/staf/](http://www.sjsu.edu/writingcenter/about/staf/).

**Peer Mentor Center**
The Peer Mentor Center is located on the 1st floor of Clark Hall in the Academic Success Center. The Peer Mentor Center is staffed with Peer Mentors who excel in helping students manage university life, tackling problems that range from academic challenges to interpersonal struggles. On the role to graduation, Peer Mentors are navigators, offering “roadside assistance” to peers who feel a bit lost or simply need help mapping out the location of campus resources. Peer Mentor services are free and available on a drop-in basis, no reservation required. The Peer Mentor Center website is located at [http://www.sjsu.edu/muse/peermentor/](http://www.sjsu.edu/muse/peermentor/).
### Stat095 Elementary Statistics Summer 2011

#### Course Schedule

*This course will follow the syllabus to the extent possible. However, the timing and specific nature of topics may change. Any changes will be announced in class as far in advance as possible. You are responsible for keeping informed of any changes made to the class schedule.*

<table>
<thead>
<tr>
<th>Date</th>
<th>Class Topic</th>
<th>Reading</th>
<th>Assignment due</th>
</tr>
</thead>
</table>
| 6/6 (Mon)  | About this course
             | Introduction to Statistics
             | Frequency Distribution | Ch. 1
             | Ch. 2 |                           |
| 6/8 (Wed)  | Frequency Distribution
         | Central Tendency
         | Variability | Ch. 2
         | Ch. 3
         | Ch. 4 | HW 1                      |
| 6/13 (Mon) | Variability
        | Z-scores
        | Probability | Ch. 4
        | Ch. 5
        | Ch. 6 | HW 2 & 3                  |
| 6/15 (Wed) | Probability
        | Probability & Samples
        | Exam 1 (Chs. 1 – 4)
        | Last due date for late HWs 1-4 | Ch. 6
        | Ch. 7 | HW 4 & 5                  |
| 6/20 (Mon) | Probabilities & Samples
         | Hypothesis testing | Ch. 7
         | Ch. 8 | HW 6 & 7                  |
| 6/22 (Wed) | Introduction to the t-statistic
         | Exam 2 (Chs. 5-8)
         | Last due date for late HWs 5-8 | Ch. 9 | HW 8                      |
| 6/27 (Mon) | t test for two independent samples
<pre><code>     | t-test for two related samples | Ch. 10 &amp; 12 | HW 9                      |
</code></pre>
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter(s)</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/29 (Wed)</td>
<td>Analysis of Variance</td>
<td>Ch. 13</td>
<td>HW 10 &amp; 11</td>
</tr>
<tr>
<td></td>
<td>Exam 3 (Chs. 9-12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7/4 (Mon)</td>
<td>Analysis of Variance</td>
<td>Ch. 13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation and Regression</td>
<td>Ch. 15</td>
<td></td>
</tr>
<tr>
<td>7/6 (Wed)</td>
<td>Correlation and Regression</td>
<td>Ch. 15</td>
<td>HW 12 &amp; 13</td>
</tr>
<tr>
<td></td>
<td>Exam 4 (Chs 13 &amp; 15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Student Information Sheet
Elementary Statistics – Summer 2011

1. Your Name (Please print)

2. Best way to contact you if necessary (e.g., e-mail address)

3. Major(s)/ and Minor

4. Year in school (Freshman, Sophomore, Junior, Senior, Graduate student)

5. Why are you taking this class?

6. Would you describe yourself as math phobic? (Explain)

7. Are you planning to pursue a graduate degree? A master degree or a doctoral degree? In what area (be specific if possible)?

8. Any information you would like me to know about you?