San José State University
Department of Psychology
Statistics 115
Intermediate Statistics Section 01
Spring 2013

Instructor: Dr. Megumi Hosoda
Office Location: DMH Room 315
Telephone: (408) 924-5637
Email: megumi.hosoda@sjsu.edu
Office Hours: Mon 1:20 – 2:50 pm or by appointment
Class Days/Time: M W 3:00 – 4:15 pm
Classroom: DMH359
Prerequisites: Elementary Statistics (Stat 95)

Course Webpage
The syllabus will be posted at [http://www.sjsu.edu/psych/Syllabus/Stat_115/](http://www.sjsu.edu/psych/Syllabus/Stat_115/). Copies of the course materials such as the syllabus, homework assignments, and handouts will be found on my faculty web page at [http://www.sjsu.edu/people/megumi.hosoda/](http://www.sjsu.edu/people/megumi.hosoda/) or accessible through the Faculty Web Page links on the SJSU home page. You are responsible for regularly checking with the messaging system through MySJSU.

Course Description
Statistical analysis at the intermediate level; descriptive statistics, t-statistic, chi-square, analysis of variance, correlation and regression, and topics in experimental design; use of a statistical program, Statistical Package for Social Sciences (SPSS) 20.0 for Windows, for statistical analyses and interpretation.

Learning Outcomes
The major goal of this course is to provide students with the solid foundation in statistics, by introducing them to the various types of statistics used in psychology and other social sciences. Students will examine the logic and strategies of scientific research designs and will learn how to use appropriate inferential statistics to make sense out of data. At the end of the course, students should be able to understand the “what, when, and how” of statistics.
That is, students will learn what statistics are available, when to use specific statistics, and how to interpret results.

**Course learning outcomes (CLOs)**
Upon successful completion of this course, students will be able to:

- **CLO1** - Understand the logic of statistical concepts.
- **CLO2** - Use appropriate statistical methods to solve quantitative problems and test hypotheses.
- **CLO3** - Understand the logic and strategies of scientific research designs
- **CLO4** - Run statistical analyses using SPSS and interpret statistical information presented in SPSS output

**Program learning outcomes (PLOs)**
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.

- **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.

- **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.

**Required Texts/Readings**

**Textbook**
Other material requirements
You will need a flash drive for your data files and SPSS outputs and a calculator. You do not need a scientific calculator. You will also need four SCANTRON FORM NO.882-E sheets for examinations.

Definition of a Credit Hour
Success in this course is based on the expectations 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 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.

As an example, the expectation of work for a 3-credit course is 150-minutes of direct faculty instruction and six hours of out-of-class student work each week.

Classroom Protocol
In an effort to create a classroom environment conducive to learning, I expect you to follow the following classroom etiquette:

1. Arrive for class on time. Arriving late disrupts other students and interferes with continuity of the lectures and class activities. If for any reason you cannot avoid being late, please enter the class through the least noticeable door and take a seat quietly. This will minimize disturbance of the lecture and the concentration of your fellow classmates. Do not come in late and enter into 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.
2. Be polite and respectful to other people in the class.
3. Do not carry on conversations with others during class.
4. No cell phone use for text messaging, emailing, or talking during any class! If you anticipate an emergency call, please let me know in advance.
5. Turn off all cell phones, pagers, and any other devices that produce distraction before class.
6. Do not work on any other course material during class, including studying for other exams.
7. Do not bring a laptop to class. You do not need it for this course.
8. Do not use a cell phone in lieu of a calculator during an exam.

Recording of Class Lectures
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. 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.

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.

**Dropping and Adding**

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Refers to the current semester’s Catalog Policies section at [http://info.sjsu.edu/static/catalog/policies.html](http://info.sjsu.edu/static/catalog/policies.html). Add/drop deadlines can be found on the current academic calendar web page at [http://www.sjsu.edu/academic_programs/calendars/academic_calendar/](http://www.sjsu.edu/academic_programs/calendars/academic_calendar/). The Late Drop Policy is available at [http://www.sjsu.edu/alars/policies/latedrops/policy/](http://www.sjsu.edu/alars/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/](http://www.sjsu.edu/advising/).

**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.

**Tentative**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Three midterm examinations</td>
<td>260 pts</td>
<td>36%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>165 pts</td>
<td>23%</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>291 pts</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Total Point Possible</strong></td>
<td><strong>716 (tentative)</strong></td>
<td></td>
</tr>
</tbody>
</table>

A+ > 701 98%  C+ 557 – 571 78%
A 665 – 700 93%  C 522 – 556 73%
A- 644 – 664 90%  C- 501 – 521 70%
B+ 630 – 643 88%  D+ 487 – 500 68%
B 592 – 629 83%  D 451 – 486 63%
B- 572 – 591 80%  D- 430 – 450 60%
F < 429 <60%

**Examinations (425 points)**

There will be four examinations – three midterms and a final. Exams will be based on the lectures and reading. The exams will consist of multiple-choice items, short essay questions, and calculations. The final exam will be cumulative. Remember to bring a #2 pencil, an eraser, a calculator, and a scantron (No. 882-E) to class for 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 (291 points)**
There will be a total of twelve homework assignments. Homework assignments will require either hand calculations and/or SPSS statistical analyses (the number of homework assignment might change due to a change in schedule). Some assignments will require producing a brief result section in APA style and/or graphing. The due dates are listed in the syllabus.

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).

Note that any homework assignments sent via email will not be accepted.

**Extra Credit**
There will be two bonus homework assignments and bonus questions in some exams.
Tips to help you succeed in Stat115

1. Attend all classes, arrive on time, and take good notes.
2. Start studying at least two weeks before each exam. Form a study group with fellow students.
3. Read assigned readings before each class; read each chapter at least twice.
4. Practice working through the formulas with different data sets.
5. Regularly review previous material to prepare for the final exam.
6. Ask questions in class and during office hours. I am available to help anyone having difficulty in the class. I am the resource person.
7. Make flashcards for important concepts and terms.
8. Visit Peer Connections if you need tutoring.
9. Complete assignments as soon as the relevant information is presented in class
10. Try to apply statistics to your everyday life and interests – in such areas as sports, finance, business, childrearing, medicine, law, and entertainment.

University Policies

Academic integrity

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University’s Academic Integrity policy, located at http://www.sjsu.edu/senate/S07-2.htm, 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 is available at http://www.sjsu.edu/studentconduct/.

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 S07-2 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.
**Student Technology Resources**

Computer labs for student use are available in the Academic Success Center located on the 1st floor of the Clark Hall and on the 2nd floor of the Student Union. Additional computer labs are available at the Psychology statistics lab (DMH350) and Room 600 of Student Services Center (SSC). Lap top computers are also available in the Martin Luther King Library. SPSS will be available in the computer labs, the Psychology statistics lab, and on laptops in the Martin Luther King Library. A student version of SPSS could be purchased at Help Desk in the Clark Hall.

**SJSU Peer Connections**

The Learning Assistance Resource Center (LARC) and the Peer Mentor Program have merged to become Peer Connections. Peer Connections is the new campus-wide resource for mentoring and tutoring. Staff is there to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. Students are encouraged to take advantage of the 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 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.
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>
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</table>
| 1/23 (Wed), 1/28 (Mon) & 1/30 (Wed) | About this course  
Review of statistical concepts  
Descriptive statistics | Chs. 1 – 4 |                                    |
| 2/4 (Mon), 2/6 (Wed) & 2/11 (Mon) | Introduction to SPSS  
Normal distribution  
Probability  
Sampling distribution | Chs. 5 – 7 | 2/4 – HW 1  
2/11 – HW 2 |
| 2/13 (Wed), 2/18 (Mon) & 2/20 (Wed) | Hypothesis testing  
Power | Ch. 8 | 2/13 – HW 3  
2/20 – HW 4 |
| 2/25 (Mon) | Review of t-tests  
t-test with one sample  
Independent samples  
Repeated measures | Chs. 9-12 | 2/25 - HW 5 |
| 2/27 (Wed) | **Exam 1 (Chs. 1 – 8)**  
Last due date for the late HWs 1-5 without a penalty | | |
t-test with one sample  
Independent samples  
Repeated measures | Chs. 9-12 | 3/6 – HW 6  
3/13 – HW 7 |
| 3/18 (Mon) | Correlation and Regression  
Multiple regression | Chs. 16 & 17 | 3/18 – HW 8 |
| 3/20 (Wed) | **Exam 2 (Chs. 9 – 12)**  
Last due date for the late HWs 6-8 without a penalty | | |
<p>| 3/25 (Mon) &amp; 3/27 (Wed) | <strong>Spring recess – No class</strong> | | |
| 4/1 (Mon) | <strong>Cesar Chavez Day – No class</strong> | | |</p>
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<tr>
<th>Date</th>
<th>Class Topic</th>
<th>Reading</th>
<th>Assignment due</th>
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<tr>
<td>4/3 (Wed) &amp; 4/8 (Mon)</td>
<td>Correlation and Regression</td>
<td>Chs. 16 &amp; 17</td>
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<td>Multiple regression</td>
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<td>4/10 (Wed) &amp; 4/15 (Mon)</td>
<td>Chi Square</td>
<td>Ch. 18</td>
<td>4/10 – HW 9</td>
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<tr>
<td>4/17 (Wed) &amp; 4/22 (Mon)</td>
<td>One-way ANOVA</td>
<td>Ch. 13</td>
<td>4/15 – HW 10</td>
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<td>4/24 (Wed)</td>
<td>4/24 (Wed)</td>
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<td>Exam 3 (Chs. 16, 17, &amp; 18)</td>
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<td>Last due date for the late HWs 9 &amp; 10 without a penalty</td>
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<tr>
<td>4/29 (Wed)</td>
<td>One-way ANOVA</td>
<td>Ch. 13</td>
<td></td>
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<tr>
<td>5/1 (Wed), 5/6 (Mon),</td>
<td>Two-way ANOVA</td>
<td>Ch. 15</td>
<td>5/6 – HW 11</td>
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<td>5/8 (Wed), &amp; 5/13 (Mon)</td>
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<td>5/14 (Tuc)</td>
<td>Study day – Review session</td>
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<td>5/16 (Thu) 12:15 – 2:30</td>
<td>Final Exam (cumulative)</td>
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<td>5/16 – HW12</td>
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<tr>
<td></td>
<td>Return all the exams back to class</td>
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<td>Bonus question</td>
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<tr>
<td>5/17 (Fri)</td>
<td>Last due dates for the late HWs 11 &amp; 12 and Bonus Question</td>
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Student Information Sheet
Intermediate Statistics – Spring 2013

1. Your Name (Please print)

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

3. Major(s)/ and Minor(s)

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

5. Why are you taking this class?

6. Have you ever used SPSS?

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

8. Where and when did you take an elementary statistics course? How did you do in the course?

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

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