San José State University  
Department of Psychology  
Statistics 115  
Intermediate Statistics Section 01  
Spring 2016

Contact Information

Instructor: Dr. Megumi Hosoda  
Office Location: DMH 315  
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Email: megumi.hosoda@sjsu.edu  
Office Hours: Wed 3:15 – 4:15 p.m. or by appointment  
Class Days/Time: M W 4:30 – 5:45 p.m.  
Classroom: DMH359  
Prerequisites: Stat 95 (or equivalent)

Faculty Web Page and MYSJSU Messaging

The syllabus will be posted at http://www.sjsu.edu/psych/Syllabus/Stat_115. Course materials such as syllabus, handouts, homework assignments, and review questions can be found on Canvas. You are responsible for regularly checking with the messaging system through MySJSU (or other communication system as indicated by the instructor) to learn any updates.

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) 22.0 for Windows, for statistical analyses and interpretation. Prerequisite: Stat 95 (or equivalent)

Course Goals and Learning Objectives

Course Learning Outcomes (CLO)

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 understand 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.

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**

**Textbook**

Other material requirements
You will need (a) a flash drive for your data files and SPSS outputs, (b) a calculator that does not need to be a scientific one, and (c) five SCANTRON FORM NO.882-E sheets for examinations.

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.

Course requirements include exams and homework assignments. Tentative course calendar includes exam dates, assignment due dates, date of a final exam.

NOTE that 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. Attendance per se shall not be used as a criterion for grading.”

Grading Policy
Your letter grade for this course will be based on a total score obtained from five 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>Five examinations</th>
<th>420 pts (59%)(tentative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework assignments</td>
<td>295.5 pts (41%)(tentative)</td>
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</table>

**Total Point Possible** 715.5 (tentative)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>100-97%</td>
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<tr>
<td>A</td>
<td>96-93%</td>
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<tr>
<td>A-</td>
<td>92-90%</td>
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<td>B+</td>
<td>89-87%</td>
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<td>B</td>
<td>86-83%</td>
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<td>B-</td>
<td>82-80%</td>
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<td>C+</td>
<td>79-77%</td>
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<td>C</td>
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<td>C-</td>
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<tr>
<td>D+</td>
<td>69-67%</td>
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<tr>
<td>D</td>
<td>66-63%</td>
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<tr>
<td>D-</td>
<td>62-60%</td>
</tr>
<tr>
<td>F</td>
<td>59-0%</td>
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</tbody>
</table>

Examinations (420 points)(tentative)
There will be five examinations. 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 NOT be cumulative. Remember to bring a #2 pencil, an eraser, a calculator, and a scantron (No. 882-E) to class for each exam.
Make-up exams (without a penalty) will be given only under the most extraordinary circumstances, upon approval by your instructor of a 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 (295.5 points)(tentative)**
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 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.

At my discretion, you could be asked to redo a homework assignment. However, keep in mind that this rarely 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 three 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. Ask questions in class and during office hours. I am available to help anyone having difficulty in the class. I am your resource person.
6. Make flashcards for important concepts and terms.
7. Visit Peer Connections if you need tutoring.
8. Complete assignments as soon as the relevant information is presented in class.
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 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/smart 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 smart phones 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. **No laptop allowed in class. You do not need it for this course.**

8. Do not use a cell/smart phone in lieu of a calculator during an exam.

University Policies

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, 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.”
• “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/.

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 your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Integrity 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 at 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 (AEC) 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 at 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 are available at the Psychology statistics lab (DMH 350). 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 ($15).

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 Counseling Services**

The SJSU Counseling Services is located on the corner of 7th Street and San Carlos Street, in Room 300B, Student Wellness Center. 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.
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>
| 2/1 (Mon), 2/3 (Wed), 2/8 (Mon), 2/10 (Wed), & 2/15 (Mon) | About this course
Review of statistical concepts
Descriptive statistics
Introduction to SPSS | Chs. 1 – 5 | 2/10 – HW 1 |
| 2/17 (Wed)             | Exam 1 (Chs. 1-4)  
Last day to turn HWs 1 & 2 in without a penalty |           | 2/17 – HW 2 |
| 2/22 (Mon), 2/24 (Wed), 2/29 (Mon), & 3/2 (Wed) | Normal distribution
Probability
Sampling distribution
Hypothesis testing
Power
Print Unit normal distribution | Chs. 5 - 8 | 2/29 – HW 3
3/3 – HW 4 |
| 3/7 (Mon)              | Exam 2 (Chs. 5 – 8)  
Last due date to turn HWs 3-5 in without a penalty |           | 3/7 – HW 5 |
t-test with one sample
Independent samples
Repeated measures
Print out t-table | Chs. 9-11 | 3/16 - HW 6
3/23 – HW 7 |
| 3/28 (Mon) & 3/30 (Wed) | Spring break – no class |           |                   |
| 4/4 (Mon)              | Exam 3 (Chs. 9 – 11)  
Last due date for the late HWs 6-8 without a penalty |           | 4/4 – HW 8
Bonus question |
| 4/6 (Wed) & 4/11 (Mon) | Correlation and Regression
Multiple regression
Print out correlation table | Chs. 15 & 16 |                   |
| 4/13 (Wed) & 4/18 (Mon) | Chi Square
Print out chi-square table | Ch. 17 | 4/13 - HW 9 |
<table>
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<tr>
<th>Date</th>
<th>Class Topic</th>
<th>Reading</th>
<th>Assignment due</th>
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<tbody>
<tr>
<td>4/20 (Wed)</td>
<td>Exam 4 (Chs. 16, 17, &amp; 18) Last due date for the late HWs 9 &amp; 10 without a penalty</td>
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<td>4/20 - HW 10 Bonus question</td>
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<td>4/25 (Mon), 4/27 (Wed), &amp; 5/2 (Mon)</td>
<td>One-way ANOVA</td>
<td>Ch. 12</td>
<td></td>
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<tr>
<td>5/4 (Wed), 5/9 (Mon), 5/11 (Wed), &amp; 5/16 (Mon)</td>
<td>Two-way ANOVA</td>
<td>Ch. 14</td>
<td>5/4 - HW 11</td>
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<td>5/17 (Tue)</td>
<td>Study day – Review session</td>
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<td>5/19 (Thu)</td>
<td>Final Exam (Chs. 12 &amp; 14)</td>
<td></td>
<td>5/15 – HW12 Bonus question</td>
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<tr>
<td>5/23 (Mon)</td>
<td>Very Last day to turn late HW 11 &amp; 12 and Bonus Question</td>
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