San José State University
Department of Psychology
Statistics 115
Intermediate Statistics Section 01
Spring 2019

Course and Contact Information

Instructor: Dr. Megumi Hosoda
Office Location: DMH 315
Telephone: (408) 924-5637
Email: megumi.hosoda@sjsu.edu
Office Hours: Mon 12:00 p.m. – 1:30 p.m. or by appointment
Class Days/Time: M & W 10:30 – 11:45 a.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. Messages will be posted on Canvas.

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

Course Goals and Learning Outcomes
Course Learning Outcomes (CLO)
The major goal of this course is to provide you with the solid foundation in statistics, by introducing you to the various types of statistics used in psychology and other social sciences. You 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, you should be able to understand 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.

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

CLO1 - Understand the logic of statistical concepts
   - This objective is met through lectures

CLO2 - Use appropriate statistical methods to solve quantitative problems and test hypotheses
   - This objective is met through lectures and homework assignments

CLO3 - Understand the logic and strategies of scientific research designs
   - This objective is met through lectures and homework assignments

CLO4 - Run statistical analyses using SPSS and interpret statistical information presented in SPSS output
   - This objective is met through lectures and homework assignments

**Required Texts**

**Textbook**

[https://www.cengage.com/dashboard/#/course-confirmation/MTPQ999NPS6G/initial-course-confirmation](https://www.cengage.com/dashboard/#/course-confirmation/MTPQ999NPS6G/initial-course-confirmation)

The link below talks about the purchasing options and lists all the courses that are using Cengage at SJSU for those students who want to take advantage of Cengage Unlimited.

[https://www.cengage.com/coursepages/sjsu](https://www.cengage.com/coursepages/sjsu)

**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 five SCANTRON FORM NO.882-E sheets for examinations.

**Stat Tutor Availability**

**Access Center (CL240)**
Mon & Wed 1:00-5:00p.m.
email: socsci-success@sjsu.edu
Create appointment: sjsu.campus.eab.com
Peer Connections
You need to make an appointment to see a tutor through calling the office at (408) 924-2587 or online (http://peerconnections.sjsu.edu/).

Mon 12:30 p.m.- 3:30 p.m.
Tue 11:30 a.m.- 1:30 p.m. and 5:00-7:00 p.m.
Wed 10 a.m.- 4:00 p.m.
Thur 2:00 -4:00 p.m.
Fri 10:00 a.m. - 1:00 p.m.

Course Requirements and Assignments
“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.”

Course requirements include exams and homework assignments. Tentative course calendar includes exam dates, assignment due dates, and a 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 Information
Determination of Grades
Your letter grade for this course will be based on a total score obtained from 5 exams and 13 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></th>
<th>450 pts (59%)(tentative)</th>
<th>308 pts (41%)(tentative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five examinations</td>
<td>450 pts (59%)(tentative)</td>
<td>308 pts (41%)(tentative)</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>308 pts (41%)(tentative)</td>
<td>308 pts (41%)(tentative)</td>
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</table>

| Total Point Possible    | 758 (tentative)          |

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>100-98%</td>
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<tr>
<td>A</td>
<td>97-93%</td>
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<tr>
<td>A-</td>
<td>92-90%</td>
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<tr>
<td>B+</td>
<td>89-88%</td>
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<tr>
<td>B</td>
<td>87-83%</td>
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<tr>
<td>B-</td>
<td>82-80%</td>
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<tr>
<td>C+</td>
<td>79-78%</td>
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<tr>
<td>C</td>
<td>77-73%</td>
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<tr>
<td>C-</td>
<td>72-70%</td>
</tr>
<tr>
<td>D+</td>
<td>69-68%</td>
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<tr>
<td>D</td>
<td>67-63%</td>
</tr>
<tr>
<td>D-</td>
<td>62-60%</td>
</tr>
<tr>
<td>F</td>
<td>59-0%</td>
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</tbody>
</table>

Examinations (450 points)(tentative)
There will be five examinations. Exams will be based on the lectures and reading. The exams will consist of multiple-choice, short answer, and computational questions. 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.

For computational questions, it is important to show all of your work and the steps you undergo to arrive at your answer in order to receive at least partial or full credit.

Make-up policy
A make-up exam will be given only when

- The reason is exceptional, unforeseen, and unavoidable. Examples of exceptional circumstances are health emergencies, religious obligations, death in the family, and military services. Work scheduling is not a sufficient reason for a make-up.
- You can provide written documentation.
- You notify me immediately after you become aware of the circumstances requiring a make-up exam (either prior to the exam or within 24 hours of the scheduled exam).
- When permission is granted, a make-up exam must be completed within 6 days for the originally scheduled test date at my discretion at the testing center.

Homework Assignments (308 points)(tentative)
There will be a total of 13 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 at the end of the syllabus.

A late homework assignment will be accepted with a penalty (30% 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 70% of the total possible points. Consequently, handing in a late homework assignment will only hurt your grade in the end. Thus, I encourage you to turn each homework assignment in on the scheduled due date.

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. 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.

2. Always bring your calculator to class because we spend a great amount of class time calculating.

3. Form a study group with fellow students.

4. Read assigned readings before each class; read each chapter at least twice.

5. Practice working through the formulas with different data sets.

6. Ask questions in class and during office hours. I am available to help anyone having difficulty in the class. I am your resource person.

7. Make flashcards for important concepts and terms.

8. Visit Peer Connections (SSC, Room 600) and/or Access Center (CL240) if you need tutoring.

9. 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. 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!

5. Turn off all smart phones and any other devices that produce distraction before class.

6. **No laptop allowed in class. You do not need it for this course.**

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

**University Policies**

The Office of Graduate and Undergraduate Programs maintains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc.” You may find all syllabus related University Policies and resources information listed on GUP’s Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/

**Academic integrity**

The University Academic Integrity Policy F15-7 requires you to be honest in your academic course work. All infractions need to be reported to the office of Student Conduct and Ethical Development. For this class, all the assignments are to be completed by the individual student unless otherwise specified. If you are caught cheating on an exam, you will get a score of zero for the exam and such behavior will be reported to the university.
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. Computers are also available in the Martin Luther King Library. SPSS will be available in the computer labs and on laptops in the Martin Luther King Library.

Below is the link to access SPSS. If order to access it, students will need to be logged into their SJSU Gmail Accounts:

https://drive.google.com/drive/folders/0B7xWo7-Q7UizS2w4c2w5cnZOM1E

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.

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.
**Stat115 Intermediate Statistics Spring 2019**  
**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>
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</table>
| 1/28 (Mon), 1/30 (Wed), 2/4 (Mon), & 2/6 (Wed) | About this course  
Review of statistical concepts  
Descriptive statistics | Chs. 1 – 4 | 2/6 – HW1 |
| 2/11 (Mon)       | SPSS  
z-score                                            | Ch. 5     | 2/11 – HW2 |
| 2/13 (Wed)       | Exam 1 (Chs. 1-4)  
Last day to turn HWs 1 & 2 in without penalty |           |               |
| 2/18(Mon), 2/20 (Wed), 2/25 (Mon), & 2/27 (Wed) | Normal distribution  
Probability  
Sampling distribution  
Hypothesis testing  
Statistical Power  
**Unit normal distribution** | Chs. 6 – 8 | 2/18 – HW3  
2/25 – HW4  
2/27 – HW5 |
| 3/4 (Mon)        | Exam 2 (Chs. 5 – 8)  
Last day to turn HWs 3-6 in without penalty |           | 3/4 – HW6 |
t-test with one sample  
Independent samples  
Repeated measures  
**t-table, F-max** | Chs. 9-11 | 3/13 – HW7  
3/18 – HW8 |
| 3/25 (Mon)       | Exam 3 (Chs. 9 – 11)  
Last day to turn HWs 7-9 in without penalty |           | 3/25 – HW9  
Bonus question 1 |
| 3/27 (Wed)       | Correlation and Regression  
Multiple regression  
**Correlation table** | Chs. 15 - 16 |               |
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Chapter</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>4/1 (Mon) &amp; 4/3 (Wed)</td>
<td>No class – Spring Recess</td>
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</table>
| 4/8 (Mon), 4/10 (Wed), & 4/15 (Mon) | Correlation and Regression  
Multiple regression  
**Correlation table**  
Chi Square  
**Chi-square table** | Ch. 17 | 4/10 -- HW10                        |
| 4/17 (Wed)            | Exam 4 (Chs. 16, 17, & 18)  
Last day to turn HWs 10 & 11 without penalty |         | 11/7 – HW11  
Bonus question 2 |
| 4/22 (Mon), 4/24 (Wed), & 4/29 (Mon) | One-way ANOVA                                                       | Ch. 12  |                                      |
| 5/1 (Wed), 5/6 (Mon), 5/8 (Wed), & 5/13 (Mon) | Two-way ANOVA                                                      | Ch. 14  | 5/6 – HW12                           |
| 5/15 (Wed)            | Final Exam (Chs. 12 & 14)  
9:45 – 12:00 p.m.                                                      |         | 5/15 – HW13  
Bonus question 3 |
| 5/21 (Tue)            | Last day to turn HWs 12 & 13 without penalty  
12:00 p.m.             |         |                                      |