

**San José State University  
Department of Psychology  
Statistics 115  
Intermediate Statistics  
Summer 2020**

**Contact Information**

<b>Instructor:</b>	Dr. Megumi Hosoda
<b>Office Location:</b>	DMH 315
<b>Telephone:</b>	(408) 924-5637
<b>Email:</b>	<a href="mailto:megumi.hosoda@sjsu.edu">megumi.hosoda@sjsu.edu</a>
<b>Office Hours:</b>	Tu Th 2:45p.m. – 3:15pm. or by appointment
<b>Class Days/Time:</b>	Tu Th 10:30a.m. – 2:45p.m.
<b>Prerequisites:</b>	Stat 95 (or equivalent)

**Faculty Web Page and MYSJSU Messaging**

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) 25.0 or 26.0 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 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

### **Course Format**

This course will be synchronous – a live lecture. Recorded lectures will be also posted so that students can do either or both.

### **Required Texts**

#### **Textbook**

Gravetter, F. J. & Wallnau, L. B. (2017). *Statistics for the Behavioral Sciences* (10<sup>th</sup> ed.). Boston, MA: Cengage Learning (ISBN 978-1-305-50491-2).

#### **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.

### **Course Requirements and Assignments**

Course requirements include exams and homework assignments. Tentative course calendar includes exam dates and assignment due dates.

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 four 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

Five examinations	413 pts (59%)(tentative)
Homework assignments	287 pts (41%)(tentative)

Total Point Possible	700 (tentative)
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A+ = 100-98%	A = 97-93%	A- = 92-90%
B+ = 89-88%	B = 87-83%	B- = 82-80%
C+ = 79-78%	C = 77-73%	C- = 72-70%
D+ = 69-68%	D = 67-63%	D- = 62-60%
F = 59-0%		

### Examinations (413 points)(tentative)

There will be four examinations. These exams will test your knowledge and understanding of course material. The exams will consist of multiple-choice questions. You will need a calculator for each exam.

### 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 (287 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

might require producing a brief result section in APA style and/or graphing. The due dates are listed at the end of the syllabus. At least one assignment (HW12 requires group collaboration).

Although I accept late assignments without penalty, I encourage you to turn each homework assignment in on the scheduled due date or the scheduled exam date. Many of exam questions are similar to the problems in homework assignments. From my past experience, those who turn assignments in late do not do well in class.

Homework assignments can be sent through Canvas or directly to my email address ([megumi.hosoda@sjsu.edu](mailto:megumi.hosoda@sjsu.edu)) in a pdf file. Rather than sending each page in a pdf file, please send each assignment in one pdf file or assignments in one pdf file. To the extent possible, please do NOT take the pictures of assignment pages and send them to me. You can only write answers to questions on a separate paper, scan it in a pdf file, and send it to me. When you write your answers, please write your answers neatly.

### **Extra Credit**

There will be three bonus homework assignments.

### **Tips to help you succeed in Stat115**

1. “Attend” all classes and take good notes. The material in the course is cumulative and it becomes more complex as the session 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 an online study group with fellow students if it is possible.
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. Complete assignments as soon as the relevant information is presented in class

### **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](http://www.sjsu.edu/gup/syllabusinfo/) 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. SPSS downloads are done online. <http://its.sjsu.edu/services/software/> .

Below is the step by Step-by-step instructions.

### HOW TO DOWNLOAD SPSS

- 1) On any browser, type in <http://its.sjsu.edu/services/software/>
- 2) Click on SPSS and follow the prompt.

Note: Make sure to use your SJSU email account, NOT your personal email.

## 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 10<sup>th</sup> 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 7<sup>th</sup> 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](http://www.sjsu.edu/counseling) at <http://www.sjsu.edu/counseling>.

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## 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.*

<b>Date</b>	<b>Class Topic</b>	<b>Reading</b>	<b>Assignment due</b>
7/7 (Tue)	About this course Review of statistical concepts Descriptive statistics	Chs. 1 – 4	
7/9 (Thu)	Introduction to SPSS Normal distribution Probability Sampling distribution	Chs. 4 – 6	HW 1, 2, & 3
7/14 (Tue)	Sampling distribution Hypothesis testing Statistical Power	Chs. 7 - 8	HW 4 & 5
7/16 (Thu)	<b>Exam 1 (Chs. 1– 7)</b> Review of t-tests t-test with one sample Independent samples t-test Repeated measures t-test	Chs. 9 - 10	
7/21 (Tue)	<b>Last day to turn HWs 1-5</b> Review of t-tests t-test with one sample Independent samples Repeated measures <b>t-table</b>	Chs. 10-11	H6
7/23 (Thu)	<b>Exam 2 (Chs. 8 – 10)</b> Correlation and Regression	Chs. 15 - 16	HW7, 8, & 9
7/28 (Tue)	<b>Last day to turn in HWs 6, 7, &amp; 8</b> Correlation and Regression	Chs. 15 - 16	Bonus question 1

<b>Date</b>	<b>Class Topic</b>	<b>Reading</b>	<b>Assignment due</b>
7/30 (Thu)	<b>Exam 3 (Chs, 11, 15, &amp; 16)</b> Chi-square	Chs. 17 & 12	HW 10
8/4 (Tue)	<b>Last day to turn in HWs 9 &amp; 10</b> One-way ANOVA	Chs. 12 & 14	HW11 Bonus 2
8/6 (Thu)	Two-way ANOVA	Ch. 14	HW 12
8/7 (Fri)	<b>Exam 4 (Chs, 18, 12, &amp; 14)</b> <b>(Very last day to turn HWs 11, 12 &amp; 13 assignments by 5:00p.m.</b> <b>Note that no assignments will be accepted at all after 5:00 p.m.</b>		HW 13 Bonus 3