SJSU SAN JOSÉ STATE UNIVERSITY

College of Social Sciences · Psychology

Intermediate Statistics Section 61 STAT 115

Summer 2023   3 Unit(s)   06/05/2023 to 07/07/2023   Modified 06/02/2023

Course Description and Requisites

Statistical analysis at the intermediate level; chi-square, analysis of variance, correlation and regression, and topics in experimental design; use of microcomputers for statistical calculations.

Prerequisite: STAT 95 (or equivalent).

Notes: Intended for majors in education, nursing, personnel administration, psychology, social service and sociology, and psychology minors.

Letter Graded

Classroom Protocols

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 and study together.
4. Read assigned readings before each class; read each chapter at least twice.
5. Ask questions in class and during office hours. I am available to help anyone having difficulty in the class and/or assignments. I am your resource person.
6. Complete assignments as soon as the relevant information is presented in class
7. Make an appointment to see a tutor at Peer Connections (SSC, Room 600) if you need tutoring.

Program Information

Program learning outcomes (PLOs) are skills and knowledge that students will have achieved upon completion of the Psychology BA degree. Each course in our curriculum contributes to one or more of these PLOs. The PLOs for the Psychology BA degree are:

1. Knowledge Base of Psychology. Students will be able to demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
2. 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.
3. Critical Thinking Skills. 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.
4. Applications of Psychology. Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues. Values in Psychology. Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Course Goals

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.

Course Learning Outcomes (CLOs)

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 Materials

Required Texts/Readings

Textbook

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

Option 1: eBook: Gravetter/Wallnau - Statistics for The Behavioral Sciences 10e: Comprehensive 46e $ 49.49 ISBN: 9781305856424

Option 2: eBook + physical book (1Term): Cengage Unlimited subscription. ONLY $69.99 (+$9.99 physical book rental) for 1 semester, you get access to ALL your Cengage 14,000 eBook

Note: Buy one Cengage Unlimited subscription. You will then have access to [ALL SJSU Courses listed](#) at no extra cost.

Option 3: An used physical book (10th edition or 9th edition)

Other Material Requirements

SPSS

SPSS is free to download. Instructions on how to download SPSS on your computer are posted on Canvas. Make sure to use your SJSU email account, NOT your personal email account.

Calculator

You will need a calculator. It does not need to be a scientific one but has to have the square root function.

✅ Course Requirements and Assignments

"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." (University policy F 69-24).

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 internship, labs, and clinical practica.

✔ Grading Information

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.

Examinations (430 points)(tentative)

There will be four examinations. They will be open-book and open-note. These exams will test your knowledge and understanding of course material and be based on the lectures and reading. The exams will consist of all multiple-choice questions. You will need a calculator for each exam.

Homework Assignments (270 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. Due dates are listed for the assignment at the end of the syllabus.

Although I accept late assignments without penalty, I encourage you to turn each homework assignment in on the scheduled due 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 my course.

Homework assignments need to be submitted to Canvas 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 through Canvas. When you write your answers, please write your answers intelligibly.

Extra Credit

There will be four bonus homework assignments and bonus questions on some exams.

Grade breakdown

| Four examinations | 430 pts (61%)(tentative) |
| Homework assignments | 270 pts (39%)(tentative) |

| Total Point Possible | 700 (tentative) |

Grade	Range
A+	97% to 100%
A	93% to 96%
A-	90% to 92%
B+	87% to 89%
B	83% to 86%
B-	80% to 82%
C+	77% to 79%
C	73% to 76%
C-	70% to 72%

D+	67% to 69%
D	63% to 66%
D-	60% to 62%
F	< 60%

Assignments and Grading Policy

Make-up exam 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.

University Policies
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. Grade Forgiveness will not apply to courses for which the original grade was the result of a finding of academic dishonesty.

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. 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".

Student Technology Resources (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)

Computer labs for student use are available in the Academic Success Center (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.

SJSU Cares (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)

Students experiencing challenges meeting their basic needs including, but not limited to, access to food, shelter, and a safe space are encouraged to contact SJSU Cares. Students who feel that their class performance may be affected by these challenges are encouraged to notify their professors, if comfortable doing so. Faculty members may be able to provide flexibility within the course for students working with a case manager.

🏛 University Policies

Per University Policy S16-9 (PDF) (http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on the Syllabus Information (https://www.sjsu.edu/curriculum/courses/syllabus-info.php) web page. Make sure to visit this page to review and be aware of these university policies and resources.

📅 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.

Date	Class Topic	Reading	Assignment due
6/5 (Mon) & 6/6 (Tue)	About this course Review of statistical concepts Descriptive statistics Introduction to SPSS	Chs. 1 – 4	
6/7 (Wed) & 6/8 (Thu)	Normal distribution z-score Probability Sampling distribution	Chs. 4 – 7	6/7 -- HW1, 2, & 3
6/12 (Mon), 6/13 (Tue), & 6/14 (Wed)	Hypothesis testing Review of t-tests t-test with one sample t-test with two independent samples	Ch. 8 Ch. 9 Ch. 10	6/12 - HW4. & 5 6/14 – HW6 Bonus 1

6/15 (Thu)	**Exam 1 (Chs. 1 – 7)** Review of t-tests t-test with repeated sample	Ch. 10	6/15 – HW7
6/19 (Mon)	**No Class - Juneteenth Day**		
6/20 (Tue) & 6/21 (Wed)	Hypothesis testing Review of t-tests t-test with two independent samples Repeated measures t-test	Ch. 10 -11	
6/22 (Thu)	**Exam 2 (Chs. 8 – 10)** Correlation & Regression	Chs 15 & 16	6/22 - HW 8
6/26 (Mon)	Correlation and Regression	Chs. 15 & 16	6/26 – HW9 Bonus 2
6/27 (Tue)	Chi-square	Ch. 17	6/27 - HW10 Bonus 3
6/28 (Wed)	One-way ANOVA	Ch. 12	6/28 - HW11
6/29 (Thu)	**Exam 3 (Chs 11, 15, & 16)** One-way ANOVA	Ch. 12	
7/3 (Mon)	One-way ANOVA Two-way ANOVA	Ch. 12 Ch. 14	

7/4 (Tue)	No Class – Independence Day		
7/5 (Wed) & 7/6 (Thu)	Two-way ANOVA		7/5 - HW12 Bonus 4
7/7 (Fri) 7/8 (Sat)	Exam 4 (Chs, 17, 12, & 14) Very last day to turn all the assignments by 11:59p.m. Note that no assignments will be accepted at all after 11:599 p.m.		 7/8 - HW 13