Department of Psychology   Ψ   Sam Houston State University

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Psychology 387/317
Elementary Statistics/Statistics Laboratory
4 credit hours, Summer I, 2008

Text: Gravetter and Wallnau, Statistics for the Behavioral Sciences, 7th ed. (required)
        Gravetter and Wallnau, Study Guide (recommended)

Supplies: calculator with basic math functions, including square root

This course is a study of statistics as applied to psychology. It includes frequency functions, summary statistics, correlation and tests of significance. The laboratory is designed to assist students in mastery of computation and interpretation.

PURPOSE OF THE COURSE: Many psychology majors wonder why they should have to take statistics. They chose psychology because they wanted to understand themselves better and, perhaps, because they wanted to help others. However, it is important to understand that psychology regards itself as a science, that is, a research-based discipline. What we know about such topics as personality, depression, learning, development, abnormal behavior and other such psychological topics, we know because psychologists have gathered data, analyzed it, drawn conclusions and published their work in journals. In order to understand your discipline, you must have at least a basic working knowledge of statistical analysis. Therefore, following are the course goals along with their associated learning outcomes:

►Goal: **Gaining factual knowledge in the area of statistical analysis**

<u>Learning outcome</u>: you will know how to compute and use statistics which summarize central tendency and variability.

<u>Learning outcome</u>: you will understand and use the basic terminology employed in statistical analysis.

<u>Learning outcome:</u> you will understand the concepts which underlie a statistical hypothesis test.

►Goal: **Learning fundamental principles of statistical analysis**

<u>Learning outcome</u>: you will be able to recognize basic research designs and determine the appropriate statistic for each design.

<u>Learning outcome</u>: you will know how to compute a test statistic and use it to make a decision about a research problem.

►Goal: Learning to apply the outcomes of statistical analyses

<u>Learning outcome</u>: you will be able to use your statistical decision to discuss the issues posed by the research problem.

<u>Learning outcome</u>: you will know what kinds of recommendations can be made as a result of your analysis.

<u>Learning Activities:</u> Learning occurs best when students are active in that process. To that end, the laboratory for this course has been designed to give you many opportunities to **apply** what you have been learning in the lecture. Each week you will have laboratory assignments that challenge you not only to compute statistics, but also to **apply** those statistics to research problems and to interpret the outcomes.   These laboratory assignments will require you to **think critically** about the decision-making process and its application to real-world issues.

<u>Course Content:</u>
Chapter 1: Introduction to Statistics
Chapter 2: Frequency Distributions
Chapter 3: Central Tendency
Chapter 4: Variability
Chapter 5: Z-scores: Location of Scores and Standardized Distributions
Chapter 6: Probability
Chapter 7: Probability and Samples: The distribution of Sample Means
Chapter 8: Introduction to Hypothesis Testing
Chapter 9: Introduction to the t Statistic
Chapter 10: The t Test for Two Independent Samples
Chapter 11: The t Test for Two Related Samples
Chapter 16: Correlation and Regression

Attendance: Regular and punctual attendance is expected and a record will be kept of your attendance. No points, however, will be earned or lost due to attendance. It is my experience that students who are not in class regularly do not do well in the course. The material is cumulative, and missing even one class period can leave you lost when you return

Exams: Class exams will be partly multiple choice and partly computation/interpretation. The lab midterm and final will be exclusively computation/interpretation. Your percentage on each exam will be based on how many of the points you correctly acquire out of the total number of points.

All exams will be timed exams. If a student arrives late for an exam, he or she will receive no extra time to complete the exam.

I will typically return graded exams the class period following the exam and give you an opportunity to look over the exam and see the correct answers to the multiple choice items. If you want to go over the exam, you must be in class. Otherwise, if you come by the office or email me, I will simply give you your score. It is important to be in class to learn what you missed on the exam.

Make-up Exams: **There will be no make-up exams.** (School-sanctioned absences are an exception. Documentation must be provided for these **before** the missed exam. Medical emergencies must be thoroughly documented.)

Grades: Your grade is based solely upon your four class exam grades, plus your lab average. All five of these grades are weighted equally. There are no extra credit provisions—under any circumstances.

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►► Because the lab is designed as an aid in learning the material presented in class, the grade will be a combined grade – one grade for both class and lab. ◄◄
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Classroom Decorum: These requirements are designed to minimize distractions to me and to other class members.

- In the interest of common courtesy, if you must enter the classroom late, please do so inconspicuously, taking a seat as close to the door as possible. **Please do not walk in front of me when I am lecturing.**

- If you have some reason for needing to leave the classroom early, please let me know before class. Otherwise, once you are present, you are required to remain for the entire class period.

- **No sleeping in class, please!** If you are too tired to stay awake, you might as well be home in bed.

- **Please turn off your cell phone!!**

- If you must chew gum, please do so in a silent and inconspicuous manner (no popping, and no bubbles). No tobacco products, please.

- You must have both your **book** and your **calculator** with you **every day.**

Academic Dishonesty

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Any student who cheats on an exam in my class will receive a zero on that exam and will be referred to the Dean of the College for possible further disciplinary action.

Americans with Disabilities Act

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance are expected to visit with the Office of Services for Students with Disabilities located the Counseling Center. They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Counseling Center.

Religious Holidays

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for the purpose. Section 51.911(a)(2) defines religious holy day as: "a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code…" A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). The instructor will notify the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Visitors in the Classroom

Unannounced visitors to the class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the discretion of the instructor whether or not the visitor will be allowed to remain in the classroom.

If you need to bring a child to my class, you MUST obtain my permission prior to the class. The child MAY be allowed to attend, as long as he/she does not disrupt the class.

The following is a **tentative** exam schedule. I reserve the right to make any scheduling changes which I deem necessary. If you are absent, **you** are still responsible for determining whether or not an exam date has been changed.

Date	Lecture	Lab	Assignments
June 3	Chapter 1		
June 4	Chapter 2	Lab 1	Chapter 1 lab
June 5	Chapter 2 & 3	Lab 2	Chapter 1 & 2 labs
June 6	Chapter 3		
June 9	Chapter 4	Lab 1	Chapter 2 & 3 labs
June 10	**Exam I, Ch. 1 & 2**	Lab 2	Chapter 3 lab
June 11	Chapters 4 & 5	Lab 1	Chapter 4 lab
June 12	Chapters 5 & 6	Lab 2	Chapter 4 lab
June 13	**Exam II, Ch. 3 & 4**		
June 16	Chapter 7	Lab 1	Chapters 5 & 6
June 17	Chapter 8	Lab 2	Chapters 5 & 6
June 18	Chapter 8	Lab 1	**Midterm (1,2,3,4,5,6)**
June 19	Chapter 9	Lab 2	**Midterm (1,2,3,4,5,6)**
June 20	**Exam III, Ch. 5,6,7,8**		
June 23	Chapter 10 & 11	Lab 1	Chapter 9 & 10 labs
June 24	Chapter 11 & 16	Lab 2	Chapter 9 & 10 labs
June 25	Chapter 16	Lab 1	Chapter 16 lab
June 26	Chapter 16	Lab 2	Chapter 16 lab
June 27	Chapter 16		
June 30	**Lab Final (9,10,11,16)**		
July 1	**Exam IV (9,10,11,16)**		