

**PSYCHOLOGY 2307:1 - INTRODUCTORY STATISTICS FOR THE
BEHAVIORAL SCIENCES
FALL - 2014**

INSTRUCTOR:

Dr. Jay Downing
LH 208B, 837-8163
Office Hours: M, & W, 1:00 p.m.-2:00 p.m., T &
TH, 9:30 a.m.-10:30 a.m., or by appointment.

E-MAIL ADDRESS:

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PREREQUISITE:

There is no prerequisite for this course. It is strongly recommended that before taking this course students should have already completed their core curriculum math requirement (MATH 1310 or higher).

CLASS MEETINGS:

TR, 8:00 a.m.-9:15 a.m.
LH 300

REQUIRED TEXTS:

McCall, R.B. (2001). Fundamental statistics for behavioral sciences (8th ed.). Belmont, CA: Thomson Wadsworth.

Kirpatrick, L.A., & Feeney, B.C. (2013). A simple guide to SPSS for Windows for version 20.0 and 21.0. Belmont, CA: Thomson Wadsworth.

ADDITIONAL MATERIALS:

You will also need a calculator for this course. The Texas Instruments TI-30 would be a good model to use in the course. This machine costs about 15 dollars. Whichever calculator you choose, it should let you calculate descriptive statistics (mean, standard deviation, and variance) on a set of numbers that you enter into a statistics register. Don't spend too much or too little money on a calculator for the course.

PURPOSE OF THE COURSE:

PSYC 2307 is designed to introduce you to the techniques used in conducting analyses of social science research data. The course will expose you to both descriptive statistical operations (mean, median, mode, etc.) and inferential statistical operations (t-tests, one-way ANOVA, and two-way ANOVA). This course is important in that it will provide you the tools to understand many of the results reported in social science research studies. You should also be able to conduct the proper basic analyses on data you may collect after completing this course. You will also be introduced to a computer based statistical package called SPSS in this course. The attached schedule lays out a tentative plan for the fall, at least in terms of the general topics we will cover in the course.

COURSE REQUIREMENTS:

Students are expected to:

- 1) study assigned materials before the class meeting in which the readings are discussed, bringing their ideas and questions to each class,
- 2) complete all assignments and turn them in as scheduled, and
- 3) regularly attend and participate the class.

GRADING:

Course grades will be assigned on the basis of the TOTAL number of points students accumulate during the fall across tests, quizzes and homework (number to be determined), and participation (completing homework on time, etc.). All tests, quizzes, and homework assignments are required, will be cumulative, and will involve calculations and problem solving. Tests and quizzes will be based on chapters from the text, lectures, and discussion. Students should check their exam scores after each test. If a student feels there is an error in their score, it is her or his responsibility to contact the instructor. **Test scores will only be corrected up until the next test is administered.** After a subsequent test is administered, no change in previous scores will be made.

Your will complete one reaction report every week based on any readings you do, any experience, or any discussion you have. This report can be as long or as short as you desire. It should, however, be limited to your reactions, by this I mean your feelings. I want you to feel as free as possible in these reports in expressing your feelings about anything you want to write about, whether or not it has anything to do with the course. Your first reaction report is due Thursday, September 4 at the beginning of class. This paper focuses on the affective component of your learning and should be sent to me via Blackboard 9.

We will be keeping a brisk pace as we go through the material in the course. It is vital that you turn in homework assignments on time. One of my pet peeves is when students turn in assignments after the agreed due date. **Therefore, if you turn in all your homework assignments on time, an additional 5%, or half a letter grade, will be added to your homework and quiz score total. If, however, you turn in an assignment late, 5%, or half a letter grade, will be deducted from your score on that particular assignment for each day it is late.**

The final exam will cover material from the entire semester and will be slightly longer than the previous exams. The cumulative final exam is scheduled for THURSDAY DECEMBER 11, 2014, from 8:00 a.m.-10:00 a. in LH 300.

I want each of you to know that everyone in this course can earn an "A," when they accumulate enough points. When you earn 90 percent or more of the points possible in the course you will have earned an "A," 80 to 89 percent of the points a "B," and so on.

Grades will be based on the following distribution (points to be determined):

Tests	50%
Quizzes & Homework	40%
Participation	10%
Total	<u>100%</u>

OTHER THINGS YOU NEED TO KNOW:

Three ground rules apply to this course:

- 1) we start on time,
- 2) regular attendance is expected, and

3) the time we spend together each week is ours to explore basic statistical techniques. Please come to class prepared to participate.

In addition, please remove all big hats during class, as they block the view of other students and interfere with their chance to learn and participate in class.

Another piece of information needs to be covered here. Academic misconduct by a student shall include, but not be limited to, disruption of classes, giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments, or knowingly misrepresenting the source of any academic work, falsification of research results, plagiarizing of another's work, or otherwise acting dishonestly in research.

Academic misconduct is a serious offense. Failing grades for the course will be assigned to any students found to be guilty of academic misconduct in this course (e.g., caught cheating on exams, plagiarizing work).

In general, I do not take attendance. Please don't tell me your reasons for missing class. I trust each of you enough to know that you would only miss class for what for you is a good reason. I can show you data that demonstrates the fact that students don't do very well in this class if they miss class. Conversely, consistent attendance is related to better performance in this course. I would like you to come to class because you have decided it is worthwhile to attend class. I do not want to wave a carrot or stick at you to make you attend class. If you have personal obligations that interfere with this class please drop for your own sake. You won't hurt my feelings and you will prevent yourself from earning a poor mark on your transcript.

Students involved in university activities who will miss an exam can arrange with me to take a make-up exam. Students in such activities should turn their assignments in early if they will not be in class while attending a university activity.

Finally, any student in this course who has a disability that prevents the fullest expression of his or her abilities should contact me as soon as possible to discuss the appropriate accommodations necessary to complete the course requirements. Contact the ADA coordinator in the counseling center to complete the proper documentation.

Sul Ross State University is committed to equal access in compliance with the Americans With Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Grace Petty in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-171, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203.

The following pages show the tentative topic schedule for the course. The specific days and topics are subject to change, but the schedule should prove relatively accurate with respect to order of coverage and test material. I look forward to working with each of you during the coming semester.

I have made it a point to emphasize one rule concerning personal communication technology. Here it is:

Turn off all electronic equipment before you enter the classroom. This means cell phones and such. I want to be able to count on your full attention during our time together.

Program Learning Objective (PLO #4)

The graduating psychology student will attain a level of competency in the area of experimental methodology in psychology that indicates value has been added over the course of their psychology education.

Student Learning Objectives for this specific course:

Required Task-Mastery of Basic Statistical Methodology:

Goal One: The student will demonstrate the ability to decide on and choose the proper statistical test to be used to answer a specific question. This will be assessed on homework assignments and exams. (Cognitive Domain: Evaluation)

Goal Two: The student will demonstrate the ability to summarize the results of their statistical analyses and communicate them in a professional manner on both homework assignments and on exams. (Cognitive Domain: Synthesis)

Required Task-“Plain Language” Written Explanation of Statistical Findings:

Goal Three: The student will write an explanation of the results of particular statistical analyses they perform in “plain language” that will relate the information to an audience of educated people who have not had a statistics course. This will be assessed on homework assignments and exams. (Cognitive Domain: Synthesis)

Goal Four: The student will create a brief and accurate summary of particular statistical analyses they perform that can be understood by introductory psychology students. This will be assessed on homework assignments and exams. (Psychomotor Domain: Creation)

Required Task-Understanding the Abuse Potential of Statistical Findings:

Goal Five: From knowledge gained via course discussion, the student will be able to compare past examples of the abuse of statistical findings to those in our present-day world in written form. This will be assessed via article interpretation exercises. (Cognitive Domain: Evaluation)

Goal Six: The student will freely express an opinion that shows the student understands how statistical information can be abused and “How to Lie with Statistics.” This will be assessed on homework assignments and exams. (Affective Domain: Value Development)

The following page shows the tentative topic schedule for the course. The specific days and topics are subject to change, but the schedule should prove relatively accurate with respect to order of coverage and test material. I look forward to working with each of you during the coming semester.

Program Learning Objective (PLO #7)

The graduating psychology student will attain a level of emotional intelligence that indicates that value has been added over the course of their psychology education.

Student Learning Objectives for this specific course:

Required Task-Reaction Reports:

Goal Seven: The student will demonstrate the ability to engage in the self-expression of emotions by writing weekly reaction reports. (Affective Domain: Respond)

Goal Eight: The student will demonstrate value development by reporting an emotion they experienced by writing about it in the reaction reports. (Affective Domain: Value Development)

TENTATIVE CLASS SCHEDULE FOR PSYCHOLOGY 2307:1

<u>DATE</u>	<u>WEEK</u>	<u>TOPIC</u>	<u>TEXT READINGS TO MASTER</u>
8/26 8/28	1	Introduction, Course Overview, & Discussion The Study of Statistics	<u>Chap. 1</u>
9/2 9/4	2	The Study of Statistics Continued... Frequency Distributions & Graphing	<u>Chap. 2</u>
9/9 9/11	3	Frequency Distributions & Graphing Continued... Characteristics of Distributions	<u>Chap. 3</u>
9/16 9/18	4	Characteristics of Distributions Continued... Indicators of Relative Standing	<u>Chap. 5</u>
9/23 9/25	5	Indicators of Relative Standing Continued... Regression	<u>Chap. 6</u>
9/30 10/2	6	Regression Continued... Correlation	<u>Chap. 7</u>
10/7 10/9	7	Correlation Continued... TEST 1	
10/14 10/16	8	Sampling, Sampling Distributions, and Probability Sampling, Sampling Distributions, and Prob. Continued...	<u>Chap. 8</u>
10/21 10/23	9	Intro. to Hypothesis Testing: Terminology and Theory Intro. to Hypothesis Testing: Terminology and Theory Continued...	<u>Ch. 9</u>
10/28 10/30	10	Elementary Techniques of Hypothesis Testing Elementary Techniques of Hypothesis Testing Continued...	<u>Chap. 10</u>
11/4 11/6	11	Simple Analysis of Variance Simple Analysis of Variance Continued...	<u>Chap. 14</u>
11/11 11/13	12	Two-Factor Analysis of Variance Two-Factor Analysis of Variance Continued...	<u>Chap. 15</u>
11/18 11/20	13	Nonparametric Techniques and Summing Up Nonparametric Techniques and Summing Up Continued...	<u>Chap. 16</u>
11/25 11/27	14	TEST 2 A WELL-DESERVED VACATION FOR ALL	
12/2	15	Final Day-What Can This All Mean?	
12/11		FINAL EXAM, 8:00 A.M. - 10:00 A.M., LH 300	

SPECIAL NOTATION FOR EDUCATION STUDENTS:

I know that some education students may take this course. This course addresses some of the objectives of the TExES Exam for the subject area of social science, which includes a psychology portion. Specifically, this course may address the following objectives, among others.

DOMAIN VI

SOCIAL STUDIES FOUNDATIONS, SKILLS, RESEARCH, AND INSTRUCTION

Competency 021 (Sources of Social Studies Information; Interpreting and Communicating Social Studies Information)

The teacher understands sources of social studies information and knows how to interpret and communicate social studies information in various forms.

The beginning teacher:

- Demonstrates knowledge of characteristics and uses of primary and secondary sources (e.g., databases, maps, photographs, documents, biographies, interviews, questionnaires, artifacts).
- Assesses multiple points of view and frames of reference relating to social studies issues, and knows how to support a point of view on a social studies issue or event.
- Organizes and interprets information from outlines, reports, databases, narratives, literature, and visuals including graphs, charts, timelines, and maps.
- Communicates and interprets social studies information in written, oral, and visual forms, and translates information from one medium to another (e.g., written to visual, statistical to written or visual).

Competency 022 (Social Studies Research)

The teacher understands social science and historical research methods, including procedures for formulating research questions and for organizing, analyzing, evaluating, and reporting information.

The beginning teacher:

- Knows how to formulate research questions.
- Uses appropriate procedures to reach supportable judgments and conclusions in social studies.

- Understands social studies research and knows how social scientists and historians locate, gather, organize, analyze, interpret, and report information using standard research methodologies.
- Knows how to analyze social studies information by sequencing, categorizing, identifying associations and cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations, and drawing inferences and conclusions.
- Analyzes social studies data using basic mathematical and statistical concepts and other analytical methods.

The interested student is informed that for full information concerning the TExES exam in education concerning psychology as a part of the social sciences, they should contact the SRSU Education Department for materials concerning test preparation and administration. It is the student's responsibility to inform the instructor of this course if he or she is a candidate for the exam. If so, the instructor can guide them to resources that will assist with their exam preparation.