



## PSYCHOLOGY 2317: STATISTICAL METHODS IN PSYCHOLOGY SOUTHWEST COLLEGE

INSTRUCTOR: Barbara Lachar                      SECTION: CRN55022  
PHONE: 281-242-3058                              FALL 2011, 16 weeks MW 12:30 – 2 PM  
OFFICE HOURS: 2:00 -2:30PM Mon.          Stafford – Scarcella Rm. W110  
E-MAIL: Barbara.Lachar@hccs.edu          **FINAL EXAM: WED. 12/14 Noon-2PM**

**COURSE DESCRIPTION:** An introduction to the use of scientific methods in psychology and to the statistical analysis of data. Attention is given to descriptive, correlation and inferential statistical methodology.

**PREREQUISITE:** Must be placed into college level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0319 as a co-requisite) and be placed into MATH 0312 (or higher).

**COURSE GOALS:** To develop knowledge and skills in the use of proper statistical methodology (both descriptive and inferential statistics) in analyzing data collected by scientific methods in psychology.

### **STUDENT LEARNING OUTCOMES:**

1. Define and identify basic concepts in inferential and descriptive statistics.
2. Explain and apply the concepts and procedures of descriptive statistics.
3. Describe and utilize principles of probability and hypothesis testing.
4. Apply and interpret common inferential statistical tests and correlational methods.

### **OBJECTIVES:**

Part I: The basic components of statistics.

1. To learn the basic terminology and logic of statistical analysis.
2. master definitions and computations with the exception of the power curve and the sample size requirements.

Part II: Applications of inferential statistics to the scientific method

1. The t test will be introduced to replace the z test.
2. Compare and compute one sample, independent sample and related sample t-tests.
3. Identify, apply, compute and interpret ANOVA, correlation and regression, and Chi Square

## COURSE CALENDAR AND ASSIGNMENTS

Problems are from the 7<sup>th</sup> edition textbook by Gravetter & Wallnau located at the rear of each chapter; the answers are in the rear of the book. You are expected to check your own answers and correct your problems. **No credit for copying the answers & not showing work. Show formulas and substitution TO OBTAIN CREDIT.** Problems are to be submitted at the time of each exam.

August 29 August 31	Introduction to course: syllabus Chapter 1 Introduction to Statistics Ch 1 (problems 1, 15, 17, 21, 23)
September 5 September 7	Labor Day Holiday – No Class Ch 2 Frequency Distributions (problems 3, 5, 7, 13, 19, 21)
September 12 September 13	Chapter 3 Central Tendency (problems 3, 5, 19, 21, 23) Chapter 4 Variability (problems 5, 7, 13, 17, 19, 23)
September 19 September 21	Review for Exam #1 Exam #1, Chapters 1, 2, 3, and 4
September 26 September 28	Chapter 5 Z-Scores (problems#3, 7, 9, 21, 23, 27) Chapter 6 Probability (problems# 1, 5, 7, 13, 15, 17, 21)
October 3 October 5	Ch, 7 Dist. of Sample Means (problems 3, 5, 13, 15, 21, 23) Ch 8 Hypothesis Testing (problems 1, 3, 5, 11, 15, 17, 19)
October 10 October 12	Chapter 8 Review for Exam #2
October 17 October 19	Exam #2, Chapters 5,6,7,8 Chapter 9 Intro to the t-Statistic (problems 1, 5, 11, 15, 17, 19, 23)
October 24 October 26	Chapter 10 –2 Independent Samples t-test (problems 3, 9, 11, 15, 19, 25) Chapter 11 Related Samples t-test (problems# 1, 9, 11, 13, 17, 21)
October 31 November 2	Review for Exam #3 Exam #3 Chapters 9, 10, and 11
November 7 November 9	Chapter 12 Estimation (problems 1, 3, 5, 15, 19) Chapter 13 Analysis of Variance (problems 3,5,9,19,21)
November 14 November 16	Review for Exam #4 Exam #4 Variance Chapters 12 and 13
November 21 November 23	Chapter 15 Correlations and Regression Chapter 15 (problems #5, 7, 9, 19, 21,23, 25)
November 28 November 30	Chapter 16 Chi Square16 (problems #3, 7, 9, 17, 19 and 21) Review for Exam #5
December 5 December 7	Exam #5: Chapters 15 and 16 Review for Final Exam
December 14	Comprehensive Final Exam- NOON – 2PM

**REQUIRED TEXTBOOK: Gravetter, F.J. and Wallnau, L.B. (2011) Essentials of Statistics for the Behavioral Sciences, .7<sup>th</sup> ed., Wadsworth ISBN: 9780495812203**

**STUDY GUIDE: Gravetter, F.J. (2011) Study Guide for Essentials of Statistics for the Behavioral Sciences, Wadsworth. ISBN: 9780495903918**

**TEXTBOOK WEB SITE: [www.thomsonedu.com/psychology/gravetter](http://www.thomsonedu.com/psychology/gravetter)**

The accompanied textbook website offers some useful information concerning the statistical concepts. It also provides practice quiz for each chapter.

**CLASSROOM ACTIVITY:**

The instructor will prepare lectures, demonstrations and assign learning exercises to cover each topic listed on the schedule. Lectures will cover much of the material on which you will be tested. Read the assigned chapters prior to class and complete the homework assignments. Come prepared to participate by asking questions, sharing examples and giving your opinion. There will be an opportunity for questions during class, and to review tests items after they are graded. The material will reappear on the comprehensive final exam.

**INSTRUCTOR RESPONSIBILITIES: Prepare class activities, lectures and exams  
Review and evaluate results. Assign grades.**

**STUDENT RESPONSIBILITIES:**

- Attend classes in a timely manner and participate.
- Read and comprehend the textbook
- Complete required assignments and exams
- Request help in the event of questions or problems
- Maintain copies of paperwork, handouts, and assignments, including this syllabus

**STUDENTS WITH DISABILITIES:**

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty members are authorized to provide only the accommodations requested by the Disability Support Services Office.

The ADA office for the Southwest College and Dr. Becky Hauri can be reached at 713-718-7910. Special accommodations can be provided to only those students who show proper documentation.

**HCC Policy Statement: Academic Honesty**

A student who is academically dishonest is, by definition, not showing that the coursework has been learned, and that student is claiming an advantage not available to other students. The instructor is responsible for measuring each student's individual achievements and also for ensuring that all students compete on a level playing field. Thus, in our system, the instructor has teaching, grading, and enforcement roles. You are expected to be familiar with the University's Policy on Academic Honesty, found in

the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion.

Cheating on a test includes:

- Copying from another students' test paper;
- Using materials not authorized by the person giving the test;
- Collaborating with another student during a test without authorization;
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test that has not been administered;
- Bribing another person to obtain a test that is to be administered.

Plagiarism means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

Collusion mean the unauthorized collaboration with another person in preparing written work offered for credit. Possible punishments for academic dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook)

### **HCC Policy Statements**

*Class Attendance - It is important that you come to class!* Attending class regularly is the best way to succeed in this class. Research has shown that the single most important factor in student success is attendance. Simply put, going to class greatly increases your ability to succeed. You are expected to attend all lecture and labs regularly. You are responsible for materials covered during your absences. Class attendance is checked daily. Although it is your responsibility to drop a course for nonattendance, the instructor has the authority to drop you for excessive absences.

If you are not attending class, you are not learning the information. As the information that is discussed in class is important for your career, students may be dropped from a course after accumulating absences in excess of 12.5% hours of instruction. The six hours of class time would include any total classes missed or for excessive tardiness or leaving class early.

You may decide NOT to come to class for whatever reason. As an adult making the decision not to attend, you do not have to notify the instructor prior to missing a class. However, if this happens too many times, you may suddenly find that you have "lost" the class.

Poor attendance records tend to correlate with poor grades. If you miss any class, including the first week, you are responsible for all material missed. It is a good idea to

find a friend or a buddy in class who would be willing to share class notes or discussion or be able to hand in paper if you unavoidably miss a class.

Class attendance equals class success.

### **HCC Course Withdrawal Policy**

If you feel that you cannot complete this course, you will need to withdraw from the course prior to the final date of withdrawal. Before, you withdraw from your course; please take the time to meet with the instructor to discuss why you feel it is necessary to do so. The instructor may be able to provide you with suggestions that would enable you to complete the course. Your success is very important. Beginning in fall 2007, the Texas Legislature passed a law limiting first time entering freshmen to no more than **SIX** total course withdrawals **throughout** their educational career in obtaining a certificate and/or degree.

To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor *may* “alert” you and HCC counselors that you might fail a class because of excessive absences and/or poor academic performance. It is your responsibility to visit with your professor or a counselor to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

If you plan on withdrawing from your class, you **MUST** complete the process **PRIOR** to the withdrawal deadline to receive a “W” on your transcript. You can drop a course by returning to the same online enrollment page that you used to originally register for classes. From the drop-down menu, select enrollment – drop instead of enrollment – add. **\*\*Final withdrawal deadlines vary each semester and/or depending on class length, please visit the online registration calendars, HCC schedule of classes and catalog, any HCC Registration Office, or any HCC counselor to determine class withdrawal deadlines.** If you do not withdraw before the deadline, you will receive the grade that you are making in the class as your final grade.

Registration Office, or any HCC counselor to determine class withdrawal deadlines.

***Remember to allow a 24-hour response time when communicating via email and/or telephone with a professor and/or counselor. Do not submit a request to discuss withdrawal options less than a day before the deadline.*** If you do not withdraw before the deadline, you will receive the grade that you are making in the class as your final grade.

### **Repeat Course Fee**

The State of Texas encourages students to complete college without having to repeat failed classes. To increase student success, students who repeat the same course more than twice, are required to pay extra tuition. The purpose of this extra tuition fee is to encourage students to pass their courses and to graduate. Effective fall 2006, HCC will charge a higher tuition rate to students registering the third or subsequent time for a

course. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available.

### **Classroom Behavior**

As your instructor and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. Your instructor takes this responsibility very seriously and will inform members of the class if their behavior makes it difficult for him/her to carry out this task. As a fellow learner, you are asked to respect the learning needs of your classmates and assist your instructor achieve this critical goal.

### **Use of Camera and/or Recording Devices**

As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic devices, and will not use these devices in the classroom unless you receive permission from the instructor.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations

### **EVALUATION AND GRADES:**

Your final grade will be calculated according to the following core competency formula:

- A. The best four of five hourly exams and your final exam will be averaged and weighted 90%. Reading, computational and listening objective.
  - B. Daily assignments (10%) Written and Oral Communication-Internet Skills
- Final Averages will earn the following grades

**A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = Below 60%**

**You may earn one bonus point per chapter by completing and submitting the practice quizzes provided on the student companion website to the textbook. Bonus points will also be available for correct responses to daily quizzes. Students who are late will not be eligible for bonus points.**

Plan to take all exams. THERE ARE NO MAKE-UP EXAMS PROVIDED, with the exception of very drastic circumstances or emergencies. ONE MISSED EXAM SCORE WILL BE DROPPED.”. The final exam grade will not be dropped.

Exams will be open note and you may refer to your homework assignments during the exam. Assignments will be collected for the chapters following each exam. **You may not use the interior of the textbook, the actual chapter content, but you may refer**

**to the statistical tables in the rear of the book, the formulas listed on the inside of the book cover and any personal notes/homework solutions you prepare. Photocopies of textbook material other than tables MAYNOT BE USED DURING ANY EXAMINATION.**

**PLEASE TAKE CARE OF ALL PERSONAL NEEDS PRIOR TO THE BEGINNING OF AN EXAMINATION. NO ONE WILL BE ALLOWED TO LEAVE THE ROOM AFTER BEGINNING AN EXAM WITHOUT SUBMITTING THEIR ANSWERS AS COMPLETE. Anyone arriving more than 15 minutes late for any examination will be considered absent and will have missed the examination.**

**PLEASE MUTE ELECTRONIC DEVICES DURING CLASS. YOU CAN BE ASKED TO LEAVE FOR THE DAY AND CONSIDERED ABSENT IF A PAGER OR CELLULAR TELEPHONE INTERRUPTS CLASS OR AN EXAMINATION.**