

Psychology 418 – Statistics and Research Design – Spring 2011

Instructor: Dr. Maddox (maddox@psy.utexas.edu)

Office: Seay 5.226

Office Hours: T/Th 10:45-11:45

Required Materials: Cozby, P.C. Methods in Behavioral Research (tenth edition); Statistics Handouts (available at Paradigm; Calculator)

Course Prerequisites: (a) Psy 301 with C or better, (b) credit for Math 302 or higher-level math, and (c) major in Psych. Computer will drop any students who do not meet these requirements.

Students with Disabilities: The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Course Description: Psychology 418 offers an introduction and broad survey of statistics and experimental methods in psychology. The overall goal is to teach you the skills needed to design, conduct, analyze, and present quality scientific research. This course examines the philosophy behind the scientific method, the basics of experimental design, the logic of hypothesis testing, the techniques necessary for data analyses and interpretation, and the framework for presentation of research results. Psychology 418 is composed of a lecture and a laboratory. The lecture and lab complement each other. There will be some overlap between the lecture and lab material, but attendance in both is essential for success.

Psychology 418 is a probably the most important course you will take as a psychology undergraduate, and it is certainly one of the most **intellectually demanding and time-consuming** courses you will take. We will spend quite a bit of time investigating the field of statistics. You will be expected to learn and **apply** many mathematical formulas. You will be performing lots of computations by hand and on the computer. The course moves at a fast pace. If you are not "up" for the challenge this semester, you are strongly urged to (a) take the course at a later date, or (b) adjust your schedule and thinking to accommodate the demands of the course. Waiting until the last minute, and "cramming" for the exams or writing your research reports the night before they are due is a sure recipe for disaster. If you keep up with the material and ask questions when you are unclear about something you will find this to be a very rewarding course. The skills you learn will allow you to test rigorously interesting hypotheses about human (and animal) behavior, and will allow you to critically evaluate the plethora of so called "facts" and "proof" you are bombarded with everyday.

Exams: **There will be four exams.** Each exam is worth 100 points. Your lowest exam score will count less (see Grading Policy outlined below). Thus, no make-up exams will be given. The exams will cover both the lecture and textbook material. The exams will consist of multiple choice and matching type questions. Calculators will be provided.

Papers: **There will be two papers.** Each paper is worth 75 points. The papers will be reports of research studies conducted by you and your fellow students. You will be graded on content, writing style, and APA style. The due dates for the two papers are provided below. The papers are due to your lab instructor by 5:00 pm on that date. Each day that a paper is late will result in a 10-point deduction. You are strongly urged to hand you paper to your TA. "I put my paper in the TA's mailbox and then it must have gotten lost", is not acceptable.

Laboratory Assignments: In the laboratory sections you will be using computers for word processing, data collection, and data analysis. You will learn to use Microsoft Word, Excel and some additional statistical package(s). **There will be 11 laboratory assignments.** You can drop one, so no make ups will be given. These will be due generally at the beginning of lab, but some are due on "off" days. Each is worth 10 points. Each day that an assignment is late will result in a 2-point deduction. Again, you are strongly urged to hand you paper to your TA. The laboratory sections are an integral part of the course and you are expected to attend. Attendance in labs will be taken.

Grading Policy: You will receive points for the exams, papers, lab assignments, and lab attendance and participation. Final grades will be determined using the following scale A = 92-100; A- = 90-91.9; B+ = 88-89.9; B = 82-87.9; B- = 80-81.9; C+ = 78-79.9; C = 72-77.9; C- = 70-71.9; D+ = 68-69.9; D = 62- 67.9; D- = 60-61.9; F = 0 -59.9. You must pass both the lecture and the lab to pass the course. The points are as follows:

Exams	best 3 of 4 (3@100)*.90 plus worst 1 of 4 (100)*.30	= 300
Papers	2 @ 75	= 150
Lab assignments	best 10 of 11 (10 @ 10)	= 100
Lab attendance and participation		= 50
Total		600

A Few Extremely Important Points:

1) My Basic Philosophy: In short, my philosophy is to treat every student in the class equally, fairly, and as a responsible, mature adult whose goal is to learn the material presented in the course. I realize people have bad testing days occasionally, or an emergency occurs that results in poor exam performance. To accommodate this possibility I have devised a grading scheme that gives less weight to your lowest test score, and allows you to drop one lab assignment. Even so, when you register for this course, you are making a commitment to the course. In light of this commitment, I expect you to attend class, arrive on time, be attentive, and behave in an honest, responsible, and mature manner.

2) No Makeup Exams: Set two alarms if you need to in order to make sure that you attend each exam. Late arrivals will be noted and points deducted.

3) Arrive On Time: If you plan to attend class, it is your responsibility to arrive early and to be prepared to start sharply at the start of class. If you are unable to fulfill this responsibility, then withdraw from the course now. Arriving late disrupts the class, and the instructor. **Too many late arrivals will be dealt with accordingly. I have been known to reduce a student's grade who consistently arrives late. If you can not arrive on time, then do not attend class.**

4) Read the assigned material prior to class: You must read the assigned material prior to the class period in which that material will be presented. A frequent comment I receive from students is that the material was covered too quickly for them to understand. Ironically, when asked whether they read and studied the material prior to class, the answer is generally "no". Students who study the material prior to class find the lectures interesting and informative, and comment that the lecture "filled in the gaps" in their knowledge. The lectures supplement the knowledge gained from reading and introduce new material not covered in the text. A student who does not read and study the material prior to class will find the lectures difficult.

5) Cheating on Exams and Plagiarism: Talking or other forms of communication or viewing another's exam will be construed as evidence of cheating. A student found cheating will receive a zero, and will not be allowed to use that as their low exam score. There have been problems in the recent past with students plagiarizing published research articles. Any student found plagiarizing a paper will receive an "F" in the course, and will be reported to the appropriate University authorities. Plagiarism is a very serious offense that can result in expulsion from UT.

6) Cell phones, etc are to be OFF and left to themselves during class. If you interact with your phone, you will be asked to leave. In short, don't come to class unless you plan to focus 100% on the lectures.

7) Policy on Withdrawals and Incompletes: I will be glad to sign a withdrawal form for any student interested in withdrawal. However, it is the student's responsibility to be familiar with withdrawal deadlines, etc. It is **University** policy that an Incomplete be given only if a student has completed at least 90% of the course work. Incompletes cannot be given to a student who fails (or is failing) the course and wishes to retake the course.

Tentative Schedule for Psychology 418

Tues, Jan 18 – Thurs, Feb 3	Intro to Research and Basic Statistics
Tues, Feb 8	Exam #1 (Chapters 1 - 7, Chapters. 12: 226-235)
Thurs, Feb 10 – Tues, March 1	Experimental Design and Hypothesis Testing
Thurs, Mar 3	Exam #2 (Chapters 8-9, Chapter 11: 207-215; Ch. 13: except F test, Effect Size)
Tues, Mar 8 – Thurs, Mar 31	More Design, Measurement/Statistics
Tues, Apr 5	Exam #3 (Chapters 10 – 14, except pgs. 235-241; Appendix B to pg. 343)
Thurs, Apr 7 – Thurs, Apr 28	More Design/ANOVA
Tues, May 3	Exam #4 (ANOVA Handout; Appendix B: 343-358)
Weds Mar 23	Paper 1 Due by 5:00pm to Lab instructor
Weds, May 11	Paper 2 Due by 5:00pm to Lab instructor