Statistical Methods for Psychology:
PSY 302, Spring 2006

CRN 38127, 4 credits

Lecture: Tuesday/Thursday, 2:00-3:20, 146 Straub

Lab: Tuesday, 4:00 – 5:20 OR Wednesday, 12:00 - 1:20 OR Wednesday, 2:00 – 3:20, 180 Straub

Instructors	**Office**	**E-mail**	**Phone**	**Office Hours**
Jonathan Cook	329 Straub	jcook4@uoregon.edu	346-4963	Tues/Thurs 3:30 - 4:30
David Small	407 Straub	dsmall@uoregon.edu	346-5778	Mon 12:30 - 1:30 & Fri 1:30 - 2:30
Steve Guglielmo	337 Straub	sgugliel@uoregon.edu	346-5770	Fri 12:00 - 1:00

Objectives:

Statistics allow us to rationally test the legitimacy of our subjective beliefs, thoughts, and observations against the relative objectivity of empirically obtained data. Because psychology is a science-based field, it is important for us to study *applied* statistics so that we are able to analyze our own research and make informed decisions about the claims of others. This course will help with both.

Learning statistics is kind of like learning to work on a car or repair a house; you can only do a good job if you have the right tools. Our tools are statistical techniques. To use these tools correctly, however, we need to develop a sufficiently deep theoretical understanding of the underlying concepts. Instruction will focus on theoretical foundations of statistical analysis, grounded by practical examples that we will analyze by hand and computer. When necessary, mathematical calculations will largely be limited to addition, subtraction, multiplication, and division, with the occasional squaring and square rooting.

Course Layout:

We will meet for lecture Tuesdays and Thursdays from 2:00 to 3:20, where we will cover conceptual material, discuss concrete examples, and have quizzes. In lab you will get practical, hands-on experience conducting analyses both by hand and on the computer. A major goal of the lab is for you to become familiar with the Statistical Package for Social Sciences (SPSS), the data analysis software we'll be using. Beyond course requirements, familiarity with SPSS is a very marketable tool when seeking employment or applying for graduate study in psychology.

There is a blackboard site for this course (http://blackboard.uoregon.edu/). If you are not familiar with Blackboard, you can come see one of the instructors or get help in lab the first week. Lecture notes will be available on Blackboard. Please print out these notes and bring them to class. This will save you time in having to write down everything that is said so that you can devote more time to understanding the material and asking questions in class.

Learning Adjustments:

Contact Jonathan right away if you have been diagnosed with a learning disability (confirmed by the Academic Learning Center) or have some other special needs that may require adjustments for you to learn/understand the material. For more information about disability services, visit their web site: http://ds.uoregon.edu/.

Class Requirements and Activities:

Readings. The primary text we will use for this course is...

Gravetter, F. J., & Wallnau, L. B. (2005). *Essentials of statistics for the behavioral sciences (5th ed.).* Pacific Grove, CA: Wadsworth.

If you are unable to purchase a copy, there is one on reserve at the library.

Participation. Attending class and lab are not required, but it will be difficult to learn the material if you skip class. *Turn responses and homework in on time if you are going to miss class!* To do well in this course you will need to stay on top of the material. Most of the information will be cumulative, so if you get behind, you will have a difficult time catching up.

If you are having difficulties with the material, come see Jonathan, David, or Steve to get help. *Don't wait and hope it gets better!*

Homework. Homework will be assigned every Tuesday and will be due at the *beginning* of class the following Tuesday. Homework will consist of conceptual questions and problem sets. For full credit, put your final answers on the answer sheets and attach additional sheets showing and explaining your work, including relevant computer printouts. Always be sure that outcomes of tests are related back to their implications for the hypothesis or question of interest. All statistical notation and reporting should follow the APA guidelines from the 5th edition of the *Publication Manual*.

Although this is not a writing class, crunching numbers is of limited use if you cannot present and interpret your results clearly, so make sure you pay attention to grammar, syntax, etc. In order to provide timely guidance, we will post homework keys on Blackboard shortly after the homework due date. However, in order for us to be able to post the key, all homework will need to be turned in, so we are going to be strict in our lateness policy. Thus, ***unless other arrangements are made in advance with your TA,*** late *homework that is turned in prior to the beginning of class on Thursday will earn half credit and no homework will be accepted after that point*.

Writing Skills: Strunk & White's *The Elements of Style* can help you write concise, precise sentences to communicate scientific information. Review the eight elementary rules of usage and the ten elementary principles of composition at http://www.bartleby.com/141/

Quizzes. We will have five quizzes, every other Thursday beginning the second week of the term. Material covered in quizzes that confused many students may make a re-appearance on future quizzes, so study any questions you missed!

Final. There will not be a final exam for the class, although all the quizzes are cumulative.

Grading:

Homework will account for 50% of your grade.

Quizzes will be worth 10% each for a total of 50% of your grade.

Course grades based on percentage of points earned			
A+	97-100	C	73-76.9
A	93-96.9	C-	70-72.9
A-	90-92.9	D+	67-69.9
B+	87-89.9	D	63-66.9
B	83-86.9	D-	60-62.9
B-	80-82.9	N	< 70
C+	77-79.9	P	70

Cheating, if detected, will earn **a failing grade** in the course. The University may impose additional penalties in accordance with the student conduct code. Don't do it! Cheating in this class = turning in the work of others as your own and copying other people's quiz answers.

What is NOT cheating? Collaborative learning; that is, getting or providing help on the **homework**. Meeting to compare notes on homework (in person or on Blackboard) can help everyone do well. However, don't just copy what someone else has done—complete the homework yourself.

Class Etiquette & Norms
Please try to come to class and lab on time, and stay for the whole class or lab
Treat your fellow students and your instructors with respect
Turn the ringer off on your cell phone during class
Ask questions and speak up during class
Stop by and see Jonathan, David, and Steve during each person's office hours

Guidelines for Teaching and Learning
The Undergraduate Education Committee (UEC) of the psychology department has recently created guidelines for teaching and learning in psychology. These guidelines are available online at http://psychweb.uoregon.edu/guidelines/index.htm.

Assignments:

Reading for each week should be completed before Tuesday's class.

Date	Topic	Exams/holidays/etc.	Reading
Week 1	Introduction, Exploratory Data Analysis		Chpt 1 - 3
Week 2	Central Tendency, Variability, & Z-Scores	**Quiz April 13th**	Chpt 4 & 5
Week 3	Probability and the Sampling Distribution		Chpt 6 & 7
Week 4	Hypothesis Testing, & Estimation	**Quiz April 27th**	Chpt 8 & 12 (to bottom of 302)
Week 5	Single sample & Independent sample t test		Chpt 9 & 12 (303 to end) & 10
Week 6	Related samples t test	**Quiz May 11th**	Chpt 11
Week 7	Analysis of Variance		Chpt 13
Week 8	Repeated Measures & Factorial ANOVA	**Quiz May 25th**	Chpt 14
Week 9	Correlation and Regression		Chpt 15
Week 10	Chi Square	**Quiz June 8th**	Chpt 16