Applied Data Analysis:
Psy 412/512, Fall 2004

CRN 14365 (412) /14379 (512), 4 credits

Tues/Thurs, 10:00-11:20, Lab Fri 9:00-9:50, 180 Straub

Instructor	Office	E-mail	Phone	Office Hours
Holly Arrow	357 Straub	harrow@uoregon.edu	346-1996	Mon 1-2, Fri 12-1
Jonathan Cook	329 Straub	Jcook4@darkwing.uoregon.edu	346-4965	Mon 2-4

Class Blackboard site: http://blackboard.uoregon.edu/

Course Goals:

This course is designed to sharpen your quantitative and analytical reasoning skills, and improve your ability to identify patterns in data, relate these patterns to substantive issues about the topic under investigation, and communicate your results and your interpretation in writing. By the end of the course you should be able to:

- generate a plan for data analysis that is appropriate to your research questions and the structure of the data
- execute your data analysis plan using SPSS
- understand and summarize the results of the statistical tests
- interpret the results in light of your research questions
- communicate your insights in writing

Course Description: We will cover the concepts and methods of descriptive and inferential statistics at an intermediate level. Topics include ANOVA & ANCOVA, linear and multiple regression, and nonparametric methods for ordinal and categorical data analysis, including (but not limited to) chi-square, log-linear models, and logistic regression. By the end of the course, you will have some understanding of each of these methods. Your understanding will vary across topics, and that is fine; statistical training is a lifelong process. We will treat you as colleagues in training and see our roles as guides, coaches, and fellow travelers. The course is designed to be difficult and rewarding. You will not understand everything, and that is okay! We are still learning, too ☺

Graduate students taking the course as 512 will have two additional responsibilities: they will be asked to explain concepts from the book to the class as part of their "response" grade, and their final exam will have some different requirements than the 412 final.

Learning Adjustments: Contact Holly 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.

Class point breakdown for grades (300 points possible)

Responses to readings:	40 pts (8 satisfactory responses, turned in on time)
Homework sets:	80 pts (best 8 out of 9, all 9 must be turned in)
Quizzes:	80 pts (7 chapter, 2 "pop"; best 8 out of 9)
Final exam:	100 pts

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 = turning in the work of others as your own, copying other people's quiz answers, or copying from someone else's final exam. For the **final,** providing or asking for help from *other students in the class* = cheating. See below for legitimate input on the final.

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. For the **final:** It is fine to have someone ***outside the class*** read a draft of your final to see if it is clearly written. When writing academic papers, scholars should get feedback from colleagues before submitting the final product to a journal ☺

Class Etiquette & Norms

Please come to class and lab on time, and stay for the whole class or lab
If you must miss a class or leave early, let Holly or Jonathan know so we don't either wait for you or worry about you
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
Ask questions on Blackboard site—that way everyone can see the answers
Stop by and see Holly and Jonathan during each person's office hours

Homework #6: Problem 7.3
Notes: Watch out for the missing data (coded as -9).

Homework #7: Problems 8.1 and 8.7.
Notes: For 8.1, SKIP the confidence interval. SPSS won't do this, and since *Everitt seems incapable of following his own instructions,* I won't expect you to. Also for 8.1, discuss WHY we should be skeptical of attributing any results to therapy.

Homework #8: Problems 9.2, 9.4, 9.7
Notes: Your SPSS guide (Gardner) describes how to generate summary tables, which involves writing syntax. Jonathan will also cover this technique in lab.

Homework #9: Problems 10.1 & 10.2
Note: 10.1: By "a suitable logistic model" he means a regression equation, giving the relevant numbers for the betas. Include in your discussion: Explain (in terms suitable for lay person) how the type of accident (collision versus rollover) affects your odds of being severely injured.
Note 10.2: Along with "exploring" the associations between the variables, select a reasonable subset of elements for a suitable reduced model.

FOR ALL HOMEWORK ASSIGNMENTS: For each problem (in each homework set), *type* a results paragraph (describing what you did) and a discussion paragraph (explaining what it means for the research topic). Follow APA Publication Manual, 5th edition, for the format of reporting statistical tests. Also, include graphics when necessary.