

# Psych 611: Data Analysis I, Fall 2005

**Lecture:** 260 Condon Tu & Th 10:00 - 11:20 **Lab:** 180 Straub, Fri 10, 11, or 12 CRN: 15451

| Professor:  | Teaching Assistant:  | Teaching Assistant:                                    |
|---|--|--|
| Dr. Holly Arrow   | Nate Dieckmann   | Adam Kramer  |
| <b>Phone:</b> 346-1996  | 346-4963   | 346-3936   |
| <b>Office:</b> 357 Straub   | 329 Straub   | 383 Straub   |
| <b>Office Hrs:</b> Tu, Th 3:30-4:30                                       | Mon 12-2   | Mon 2-4  |
| <b>E-mail:</b> <a href="mailto:harrow@uoregon.edu">harrow@uoregon.edu</a> | <a href="mailto:ndieckma@uoregon.edu">ndieckma@uoregon.edu</a> | <a href="mailto:adik@uoregon.edu">adik@uoregon.edu</a> |

**Course Description:** This is the first in a 3-term sequence of classes designed to provide a thorough grounding in statistical concepts, methods, and applications of relevance to psychological research. The course is designed to help you develop skills in the analysis and interpretation of real psychological data. The focus is conceptual and practical rather than mathematical. Thus you will learn when and why a particular statistical technique is appropriate and how to make sense of the results, rather than examining the mathematical underpinnings of procedures in depth. You will rely heavily on the SPSS statistical package to generate results, and will also complete some “by-hand” computations that illustrate key statistical principles.

**Text:** Howell, D.C. (2002). *Statistical Methods for Psychology* (5<sup>th</sup> Ed.). Pacific Grove, CA: Duxbury.

**Lectures and Laboratories:** See page 2 for lecture topics and reading assignments. Lecture notes will be posted on the Blackboard course site by 10 PM the night before class. Please bring these notes to class. Labs are on Friday (10-10:50, 11-11:50 or 12-12:50) in 180 Straub, and provide hands-on computing experience illustrating concepts discussed in lectures. Your TA will also discuss the weekly problem sets, review material before exams, and address questions you have about topics covered in lecture and text.

**Software:** You will be using SPSS software installed on the PCs in 180 Straub (open 8am-9pm Monday through Thursday, and 8-5 Friday). You may also use SPSS at the Social Science Instructional Laboratories (SSIL), 442/445 McKenzie Hall, for a fee of \$20 per term, or purchase your own copy of SPSS from the UO Bookstore. Be sure your computer is powerful enough to run it, and that you buy the right version: SPSS Graduate Pack (\$190, Mac or PC), not the scaled down SPSS student version.

**Reading Response:** A \*short\* response to the weekly reading (typed, hard copy) is due every Tuesday (Thurs for Week 1). The response has two parts: (1) \*briefly\* summarize the main points (100 words or less) and (2) identify (again, briefly) what you found most challenging or confusing. Give page numbers (and, if relevant, figure or equation numbers) so I can easily find the problem material. These responses help me adapt my Thursday lecture toward whatever students are finding most difficult, and also give you a deadline for doing the reading. Either turn in during Tuesday class or slide under my office door (357 Straub) before Tuesday 5 PM. ***Hard copy only for these, please!*** Half credit if late but turned in by Wed 5 PM.

**Homework Problems:** The homework assignment will be handed out on Tuesday so you can get started before Friday lab. Submit homework ***to the appropriate TA \*via e-mail\**** before class the following Tuesday. Each homework will be graded on a 10-point scale. Collaboration: Feel free to discuss problems with other students and compare preliminary answers, but turn in your own work-- \*don't\* photocopy or otherwise copy another student's work in place of working through the problems yourself. Homework is the domain of TAs Nate and Adam; they will take turns teaching labs and grading the homework associated with that lab. See their handout for formatting guidelines. ***Do \*not\* send homework to Holly. Thanks!***

**Exams:** There will be one in-class midterm and a take-home final. Exams will be cumulative, with an emphasis on more recent material. Exams will be open book. Bring a calculator. However, to receive full credit for calculation problems you will need to show *\*each step\** of your calculations; do *\*not\** rely on an advanced calculator in using complex formulas.

**Grading:** The homework sets will count for 30% of your grade, the midterm for 30%, the final for 30%, and the reading responses for 10%. Homework and exams will be graded by the teaching assistants using explicit criteria that I will provide. The teaching assistants have taken this course previously and performed at a superior level. If anyone has concerns about their work being graded by a fellow graduate student, please see Holly to discuss alternative arrangements.

**Blackboard:** Announcements, lecture notes, problem sets and solutions, and links to relevant web sites will be posted on Blackboard. Students enrolled in the course will receive email in the first week of the term notifying them that the course web site is available. Go to <http://blackboard.uoregon.edu>, login (using your campus e-mail username and password), and then select "PSY 611" from the list of sites in which you are enrolled. For help with Blackboard, see <http://blackboard.uoregon.edu/local/usingbb/>, go to the library [Information Technology Center](#) (ITC), or see <http://libweb.uoregon.edu/kite/faq/blackboard.html#help>

## Lecture Topics & Reading

| Date           | Topic   | Reading: Responses due Tuesday  |
|----------------|---|---|
| Sept 27-29     | Exploratory Data Analysis                     | Chs 1 & 2<br>(Response due Thurs this week)                                     |
| Oct 4-6        | Distributions                                 | Chs 3, 4, 7.1 & 7.2   |
| Oct 11-13      | Hypothesis Testing & Estimation: T Tests      | Ch. 7   |
| Oct 18-20      | Hypothesis Testing & Estimation: Power        | Ch. 8   |
| Oct 25-27      | One-Way Analysis of Variance                  | Ch. 11  |
| Nov 1          | Contrasts                                     | Ch. 12  |
| Nov 3          | MIDTERM<br>open book, notes, bring calculator |   |
| Nov 8-10       | Two-Way Analysis of Variance                  | Ch. 13 (except 13.12 & 13.13)   |
| Nov 15-17 & 22 | Correlation & Regression                      | Chs 9 & 10 (except 10.4 & 10.5)<br>(Nov 22 response on Ch. 10 reading)          |
| Nov 24         | *Thanksgiving* NO CLASS                       |   |
| Nov 29-Dec 1   | Analysis of Categorical Data                  | Chs 5, 6, 10.4, & 10.5  |
| Dec 7          | TAKE HOME FINAL DUE AT 10 AM                  | Hand in at Holly's office (or slide under my door if you get there before I do) |