PSYB07

Data Analysis in Psychology

Fall 2010

The Thursday morning (8:00 am) session is not mandatory.

Instructor: Dr. Douglas A. Bors

Office Hours: Wednesdays 9:30 to 12:00

Textbook: Statistcal Methods for Psychology (7th ed.) by David Howell

T.A.s: TBA

This course is designed to provide the student with the basic principles of data analysis for both descriptive and inferential statistics. In terms of descriptive statistics, our treatment will include measures of central tendency, measures of variability, regression, correlations, and graphic presentations. Regarding inferential statistics, our introduction will include Chi Square, t-tests, and Analysis of Variance (one-way designs). A working knowledge of elementary algebra is assumed.

Grading: Your final grade in the course will be based on

quizzes and assignments (10%), a mid-term examination (40%), and a final examination (50%). There will be at least three in-class quizzes and two assingments during the term. We will take your best four marks. The quizzes will be administered in class or tutotial without warning, so be prepared! The assignments and their due dates will be announced in class. The date for the mid-term will be posted and announced early in the term. The date for the final examination will be published by the registrar's office sometime during the term.

Make-Ups

Make-up quizzes and assingments are not given. If a test is missed, do not phone or e-mail your instructor or TA concerning missed exams. Make-up mid-terms will be given at 5:00 pm on the Tuesday of the week following the original date of the mid-term exam. On the date of the make-up, the location of the exam will be posted on the office door (S-638) of Dr. Bors. If the make-up is also missed, a grade for the mid-term will be assigned on the basis of the student's relative performance on the final examination. Make-ups for final examinations are controlled by UTSC policy and the registrar's office.

Dates for Exams will be posted at the top of this page, once they have been scheduled

Tentative Course Outline

Week	Topic	Chapters
1	Basic Concepts & Descriptive Statistics	1 & 2
2	Descriptive Statistics & Graphics	2
3	Distributions & Hypothesis Testing	3 & 4

4	Probability	5
5	Chi_Square	6
6	Linear regression & Correlations Coefficients	9
7	Correlations cond.	9
8	t-tests	7
9	t-test continued; Power	7 & 8
10	ANOVA :Independent samples: One-Way ANOVA	11
11	Testing slopes and correlations	9
12	Integration	All Covered

Some Overheads for Classroom Lectures

Here are the instructions for downloading and printing the overheads.

Step #1: Click on the link from the list that corresponds to the overhead you wish to view.

Step #2: A window opens asking what you wish to do with the file. Choose "open" and then click OK.

Step #3 Under the file tab, choose the PRINT option. Note that in the window that pops up there is a "PRINT WHAT?" field. If you choose not to print them as slides (the default), you might print them as "handouts", which will put several on a sinle page and still leave you space for writing notes.

Formula Sheet

Summation : the rules of summation notation

Daycare : an example of contradictions in analyses

BasicConcepts : the basic concepts of the field

Scales : a numbers is not a numbers

Central Tendency : different types of averages

Composite Means

Interquarilte Range

Measures of Spread

Properties of Estimators----- optional derivation of sample variance (n-1) as unbiased

Degrees of Freedom

Graphs & Distributions

Standardized Scores

Normal Distribution

REVIEW Question set #1

Hypothesis testing: first look

Probability

Review Question Set #2

Binomial Distribution

Review Question Set #3

Chi Square

Regression

Optional link on Simultaneous Equations

Correlations

Review: Questions #4

t-test

ANOVA assumptions

Approaches to ANOVA

In class example overheads

Test of Significance for Regression and Correlation

Review Question #5

Final Review Questions