PSYC08

Advanced Data Analysis in Psychology

Winter 2011

Instructor: Dr. Douglas A. Bors

Final Examination April 12th at 2:00 pm

IF you family name begins with the letter A - N,

then you are in room SW319.

If you family name begins with the letter O - Z,

then you are in room SW 143.

Assignment 1. Your task is to construct three sets of data. Each set is to be comprised of three conditions. The nine conditions should have exactly the same variance. It is the condition means that are free to vary. The first data set should be constructed in such a way that the sum-of-squares error is less than the sum-of-squares treatment. The second data set should be constructed in such a way that the sum-of-squares error is equal to the sum-of-squares treatment. The third data set should be constructed in such a way that the sum-of-squares errors is greater than the sum-of-squares treatment.

Assignment 2. Your task is to construct three sets of data. EAch set to be comprised of three conditions. The nine conditions should have exactly the same variances. It is the condition means that are free to vary. The first data set should be constructed in such a way that the mean-square error is less than the mean-square treatment. The second data set should be constructed in such a way that the mean-square error is equal to the mean-square tereatment. The third data set should be constructed in such a way that the mean-square error is greater than the mean-square treatment.

Here is the address where the lectures are on line:
https://lecturecast.utsc.utoronto.ca/login.php

Tutorials: TBA

Textbook: Statistcal Methods for Psychology by David Howell

This course is designed to provide the student with the advanced principles of data analysis for both parametric and non-parametric analyses. In terms of parametric statistics, our treatment will focuson Analysis of Variance (ANOVA). In addition to the material covered in PSYB07, 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 (30%), and a final examination (60%). There will be at least five quizzes or assignments during the term. Your best four performances will used for the quiz/assignment portion of you grade. The quizzes will be administered in tutorial without warning, so be prepared! 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 are not given. Make-up mid-terms are never given without a legitimate reason. The student is required to present a medical certificate, if a test is missed due to illness. The certificate must state that, in the physician's opinion, you are unable to write the test, not just that you were examined for a complaint. Do not phone or e-mail your instructor or TA concerning missed exams. Certificates are to be given to the invigilator at the time fo the make. Make-up mid-terms will be given at 5:00 pm on the tuesday of the week following the original date of the exam. On the date of the make-up, the location of the exam will be posted on this page and on the office door (S-638) of Dr. Bors. If the make-up is also missed for legitimate reasons, a grade will be assigned on the basis of the student's relative performance on the final examination and quezzes. Make-ups for final examinations are entirely at the discretion of 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	Review of Descriptive Statistics and Graphs	1 through 7
2	Introduction to ANOVA (testing homogeneity of variance)	11
3	One-Way between-subject designs	11
4	Power & Magnitude of Experimental Effect	8 & 11
5	Introduction to Multiple Comparisons	12
6	Introduction to Repeated Measures Designs	14
7	Multiple comparisons continued	14
8	Factorial Designs (between-subjects only)	13
9	Factorial Designs (Mixed designs)	13
10	Inroduction to Multiple Regression	15
11	Non-Parametric Approaches	18
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.

[F-max Table](#)

[Formula Sheets](#)

[Basic Concetps Reviewed](#)

[Basic Theorems](#)