BIOSTATISTICS 602 LAB

SPRING 2003

Section 0102

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Lab Objectives

This is a hands-on computer lab designed to train you to use linear model procedures in SAS to analyze the experimental and treatment designs covered in lecture. We assume prior knowledge of both elementary statistical procedures and their analysis using SAS (equivalent to BIOM 601 lecture and lab). You should leave this class able to implement the linear model analyses for the designs covered in lecture and lab. A large portion of your lab grade will be determined by you ability to present the results of your data analysis in written form as if for publication in the biological literature in an abstract, paper, tables, figures, etc.

Missed Labs, late assignments and grading

You are expected to attend your registered lab section. If you miss your lab, it is your responsibility to get the assignment from a classmate and complete it on time. Lab assignments will be due at the beginning of lab. If you can not turn in an assignment on time, you are still expected to complete the assignment asap. I will note, in the grade book, that the assignment was completed. A single late assignment will not hurt your grade, but multiple late assignments and missing assignments will receive a grade of zero.

Your lab grade will account for 50% of your course grade. There will be a quiz, data analysis assignment, and/or an abstract or paper due most weeks. Lab assignments will include lecture materials. Some assignments will be more extensive and require a more formal write-up and will contribute more to your lab grade than others.

LAB SCHEDULE

WEEK	DATE	TOPIC
1	1/30	Introduction to PROC MIXED and interpreting the output.
2	2/6	Examination of assumptions: homogeneity of variances and normality.
3	2/13	CONTRAST and ESTIMATE statements. Pairwise mean comparison procedures.
4	2/20	Abstract/paper organization and structure, What do I include and where?, Presenting statistical results, Tables and figures
5	2/27	Nested sampling designs; Sample size estimation.
6	3/6	Factorials: examination of interactions, plotting means, interactions and response surfaces.
7	3/13	Factorials (continued)
8	3/20	To Be Announced
	3/27	Spring Break
9	4/3	Randomized block designs.
10	4/10	Latin square and cross-over designs.
11	4/17	Analyzing split unit designs. Analyzing combined experiments.
12	4/24	Analyzing repeated measures designs: Computed variables containing time, Repeated measures analysis.
13	5/1	Spatial correlated data.
14	5/8	Analysis of covariance techniques.