

Psy 611: Data Analysis I Fall 1990

SYLLABUS

- Instructor: Robert F. Fagot
321 Straub, 6-4924
Office Hours: 10:50-11:20 UH and 3:00-4:00 MW
- Lectures: 09:30-10:50 Tu & Th in 154 Straub
- Stat Lab: Lab Meeting: 9:30-10:20 W in 156 Straub
John McQuaid, GTF
Office 335 Straub, 6-4921 ext 47
Office Hours: 9:30-11:30 F
- Text: Glass & Hopkins (1984, 2nd Ed) Statistical Methods in Education & Psychology, plus SAS manuals.
- Lecture Notes: Purchase at EMU Campus Copy Center, 2 EMU
- Supplementary Texts (on reserve in the Main Office, 131 Straub)
Loftus & Loftus Essence of Statistics
Howell Statistical Methods for Psychology

Unit I: Introduction to Statistical Inference

<u>Topic</u>	<u>Lecture Note</u>	<u>Reading</u> <u>(Glass & Hopkins)</u>
0. Descriptive Statistics	--	Ch 1-5
1. Elementary Probability	1	Ch 9
2. Random Variables & Probability Distributions	2,3	
3. Expected Value of a Random Variable	4	Ch 4, 5, 9.12 (pp 167-8)
4. Normal Distribution	-	Ch 6
5. Point Estimation & Sampling Distributions	5	Ch 10
6. Introduction to Hypothesis Testing	6,7	Ch 11
7. Inferences about Means & Proportions	8,9	Ch 11, 14 pp 275-282
8. Inferences about mean differences	10,11	Ch 12
9. Chi-Square & F-distribution	12,13	Ch 13
10. Summary of tests on means and variances	14	
11. Goodness-of-fit tests	15	Howell Ch 6

MIDTERM EXAM ON UNIT I

Unit II: Univariate Analysis of Variance (ANOVA)

1. Single factor ANOVA designs: partitioning total sum of squares; expected mean squares and the F test; power and robustness of the F test.
2. Completely randomized multifactor designs: fixed and random factors; expected mean squares and F tests orthogonal contrasts and factorial designs; analysis of interaction; power.
3. Asking specific questions of data: error rates; contrast analysis; planned comparisons.
4. Time permitting: linear regression and trend analysis.

FINAL EXAM UNIT II only (10:15 Th Dec 13)

GRADING:	Weekly Assignments	- 10%
	Stat Lab	- 20%
	Midterm Exam	- 30%
	Final Exam	- 40%