Data Analysis II

Psy 612
CRN 24631
Winter 2009
1000-1120 UH
Chiles 125

Instructor:

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Laboratory

180 Straub   CRN: 24632, 24633   F 10-1120; 1130-1250

Course Information

This is the second course in a three course graduate level data analysis sequence. This course is devoted to topics in multiple regression with special emphasis on complex analysis of variance and experimental design. It is assumed that all students have successfully completed Psy 611 (Data Analysis I) or equivalent. In general, the text chapters listed in the syllabus cover the material planned for class on the day that they are assigned and provide more in depth coverage of some of the issues.

Inclement Weather Policy

If Eugene School District 4J cancels (not delays) school, we will cancel class. Nothing we do in this class can't wait until its safe to travel.

Texts:

Pedhazur, E. J. (1997). <u>Multiple Regression in Behavioral Research</u> (3rd Ed.). Harcourt
        Brace: San Diego, CA.
Keppel, G. & Wickens, T. (2004). <u>Design and Analysis: A Researcher's Handbook</u>. Prentice
        Hall: Upper Saddle River, NJ.

Class notes available on Blackboard

Other Useful Books:

Analysis of Variance & Experimental Design

Hays, W. L. (1994). Statistics (5th ed). Harcourt Brace College Publishers: Fort Worth.
Tamhane, A., & Dunlop, D. (2000). <u>Statistics and Data Analysis</u>. Prentice Hall: Upper Saddle
        River, NJ.
Winer, B. J. (1971). Statistical principles in experimental design (2d ed). McGraw-Hill: New
        York.

Multiple Regression & Related Issues

Cohen, J. & Cohen, P. (1983). Applied multiple regression/correlation analysis for the
        behavioral sciences. Lawrence Erlbaum Associates: Hillsdale, N.J.
Wonnacott, R. & Wonnacott, T. (1970). Econometrics. J. Wiley: New York.

Conducting Empirical Research

Abelson, R. (1995). Statistics as Principled Argument. Lawrence Erlbuam: Hillsdale, N.J.

Class Requirements:

Complete take-home midterm (35% of grade), final (50% of grade), and weekly homework
assignments (15%) of grade (see guidelines). Homework will be assigned and due each
Thursday. The laboratory section may have additional assignments.

Syllabus

Complex Analysis of Variance

1/6	Representation of Experimental Designs	
1/8	Factorial Analysis of Variance	K&W 10-13
1/13	Random Factor Models & Quasi-F's	K&W 24
1/15	Nested Designs	K&W 25
1/20	Repeated Measures and Randomized Blocks	K&W 16-20
1/22		

Multiple Linear Regression

1/27	Basic Multiple Regression	P 5	
1/29	Introduction to Matrix Algebra	P 6	**MIDTERM OUT**
2/3	Advanced Topics in Multiple Linear Regression	P 7-8	
2/5	Partitioning variance	p 9-10	**MIDTERM DUE @ 1000**
2/10	Regression with categorical variables	P 11-12	
2/12	Trend analysis	P 13	
2/17	Missing Data and Nonorthogonal Designs	K&W 14	
2/19	Analysis of covariance	K&W 15, P 14-15	
2/24	Heteroscedasticity		
2/26	Autocorrelation		
3/3	Repeated Measures ANCOVA		
3/5	Multilevel analysis	P16	
3/10	Categorical Dependent variables	P 17	**FINAL OUT**
3/12			
3/18	**FINAL DUE 8:00 AM** by e-mail to athalmay@uoregon.edu		

P: Pedhazur;
K&W: Keppel & Wickens