

## **PRE 811 – Analysis of Variance Spring 2003**

Instructor: Vicki Peyton, PhD  
Lecture: Thursdays 4:30pm to 7:10pm  
Line Number: 58322  
Classroom: 245 JRP

Office: 646 JRP  
Office phone: 864-7087  
Email: vpeyton@ku.edu  
Office hours: 2:30 – 3:30pm  
Wednesday and Thursdays.  
Other times by appt.

**Course Description and Objectives:** This course focuses on the technique of analysis of variance. Students will calculate one-way between group design analyses, multiple comparison planned and post-hoc follow up procedures, two-way and higher between group designs, analysis of covariance, and one-way within subject designs. Focus will also be directed on using and becoming comfortable with computer statistical packages to analyze data appropriate for these types of techniques.

**Textbook:** Maxwell, S.E., & Delaney, H.D. (2000). *Designing experiments and analyzing data: A model comparison perspective*. Mahwah: Lawrence Erlbaum.

**Suggested Textbook:** Akey, T., Green, S.B., & Salkind, N.J. (1999). *Using SPSS for Windows: Analyzing and Understanding Data*. Upper Saddle River: Prentice Hall.

**Other readings:** other readings will be made available through the Learning Resource Center (110 JRP)

**Supplies:** A calculator and access to the statistical package, SPSS, are required. Also, all students are required to have an email account provided by the university.

**Class readings and schedule:** Below is a TENTATIVE schedule for class discussions and assignments. This schedule is subject to change depending upon amount of student led discussion, instructor led discussion, inclement weather policies, etc.

<b><u>Date (Tentative)</u></b>	<b><u>Topics</u></b>	<b><u>Chapter</u></b>	<b><u>Assignment</u></b>
January 16	Hypothesis Testing Prediction Systems	3	
January 23	Noncentral F Distribution PRE Statistic Statistical Assumptions	3	HW #1
January 30	Categorical Predictors – One way ANOVA with 2 groups	3	<b>Quiz 1</b> HW #2
February 6	Categorical Predictors continued Effect Size Estimates	3	CA #1
February 13	Effect Size Estimates continued	3	<b>Quiz 2</b>
February 20	One way ANOVA – 3 or more groups Orthogonal Comparisons	3 4	<b>CA #1 due</b> HW #3
February 27	Simple and Complex Comparisons Multiple Comparisons	4 5	<b>Quiz 3</b> CA #2 HW #4
March 6	Multiple Comparisons continued Exam Review	5	
March 13	<b>Midterm Exam</b>	<b>3, 4, 5</b>	
March 20	<b>Spring Break</b>		
March 27	Two Way ANOVAs Interactions	7	<b>CA #2 due</b> HW #5
April 3	Interactions continued Simple Main Effects	7	CA #3
April 10	Simple Main Effects continued	7	<b>Quiz 4</b>
April 17	Higher Order Between Subjects Designs	8	<b>CA #3 due</b>
April 24	<b>No Class</b>		
May 1	Analysis of Covariance	9	HW #6
May 8	Within Subject Designs Exam Review	11, 12	
May 15	<b>Final Exam</b>		

**Grading:**

	<u>Weight</u>
Exam I	25%
Exam II	35%
Quizzes	20% (5% per quiz)
<u>Computer Assignments</u>	<u>20%</u>
Total	100%

**Grading scale:**

A	92% to 100%
A-	85% to 91%
B+	82% to 84%
B	78% to 81%
B-	75% to 77%
C+	72% to 74%
C	68% to 71%
C-	65% to 67%
D+	62% to 64%
D	58% to 61%
D-	55% to 57%
F	Below 55%

**Note.** Exam II, the Final Exam, is a comprehensive exam. There are no make-up exams. If the first exam is not taken on the scheduled date, due to an absence with a legitimate reason, the second exam will count as 60% of the class grade. If you miss a quiz, please contact me. If a quiz is missed for a legitimate reason (e.g., illness), the overall quiz grade will be based on the average on the quizzes that have been taken. Unexcused absences on quizzes or exams will result in a grade of zero.

As with any mathematically/statistically based course, the key to success (meaning, you can apply the appropriate technique, and also analyze and interpret your data after this semester is over) is repetition and frequent studying. Coming to class once a week is not enough! However, the homework and quizzes are greatly beneficial and are designed to reduce exam-related stress and to enhance future success as researchers. In addition, completing the work yourself and not relying on classmates for answers is the #1 key ingredient to “getting the most” out of this course.

As a courtesy to fellow classmates, please refrain from bringing cellular phones and beepers to class. If either of these devices is necessary, please program them to a mode of silence or set them to vibrate only.

**The staff of Services for Students with Disabilities (SSD), 135 Strong, 785-864-2620 (v/tty), coordinates accommodations and services for KU courses. If you have a disability for which you may request accommodation in KU classes and have not contacted them, please do so as soon as possible. Please also see me privately in regard to this course.**