

***PSYC 610, Analysis of Behavioral Data***  
***Fall 2004***  
***Dr. Tom Pierce***

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Office hours: M, W: 9:00 – 10:00; T, Th: 3:30-5:00. Students are welcome to make an appointment for other times during the week if these times are inconvenient.

### Goals

In this course we will discuss a variety of methods used to analyze and interpret data collected from behavioral studies. One goal of the course is to enable students to use data analytic techniques to address questions regarding human and animal behavior. A second objective is to provide students with a background sufficient to both generate and critically examine the results sections of research publications in the specialized field of psychology. A third goal will be to provide students with basic computer skills in data entry and analysis, as well as the presentation of results in APA format.

### Grading

Grades will be based on three exams. Two midterm exams will each count 30% toward the final grade. The final exam will count 35% towards the final grade. Computer assignments will count 5% toward the final grade. Class attendance is required. A student cannot receive a “A” in the course unless they get at least a “B” on the final exam.

### Makeup exams

Makeup exams will normally be given only in the event of demonstrated illness. Prior approval must be obtained in order to take a makeup exam.

### **Textbooks**

#### Required:

Darren George & Paul Mallery (2003). *SPSS for Windows Step by Step (4<sup>th</sup> Ed)*. Allyn and Bacon: Boston, MA.

#### Recommended:

APA Style Manual (5<sup>th</sup> Ed.)

D. C. Howell. (2002). *Statistical Methods for Psychology (5<sup>th</sup> Ed)*.

Most of the required reading for the course will be placed on reserve in the library and on my website. Whenever possible, students will be able to access material placed on reserve electronically through Adobe Acrobat as a .pdf file.

### Topics

1. Review of descriptive statistics
2. Introduction to Statistical Inference
3. One-way ANOVA
4. Comparisons among treatment means

### First Exam

5. Correlation and Regression
6. Multiple Regression
7. ANOVA as a Special Case of Regression
8. Factor Analysis

### Second Exam

9. Two-way ANOVA
10. Repeated-Measures ANOVA
11. Mixed-Model ANOVA
12. Power and effect size
13. Analysis of categorical data

### Final Exam

The Final Exam is cumulative. The exam will be given at 11:00 on Monday and 8:00 on Wednesday of Finals Week. Students may take the exam at either time.

### Computer assignments

One goal of the course is to provide students with the practical skills necessary to perform data analysis in a professional setting. In order to meet this goal a working knowledge of popular statistical computing packages is required. Instruction will be given in the use of *SPSS for Windows – Version 11.5* available on Radford's computer system. Students will complete assignments illustrating computer applications of the statistical tools presented in lecture. These computer skills will be applied on exams, where students will be expected to display data management, as well as data analytic skills.

### Honor Code

Students are expected and required to act in accordance with Radford University's Honor Code. Violations of the Honor Code will be handled according to the policies and procedures outlined

in Radford University's Student Handbook.

### Disabilities Statement

If you are seeking classroom accommodations under the Americans with Disabilities Act, you are required to register with the Disability Resource Office (DRO). The DRO is located in Room 32, Tyler Hall. The phone number is 831-6350. To receive academic accommodations for this class, please obtain the proper DRO forms and meet with me at the beginning of the semester.

### Miscellaneous

- Please turn your cell phone off before you come to class.