

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

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Office hours: W: 9:00 – 11:00; 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.

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:

Abrami, Cholmsky, & Gordon (2001). *Statistical Analysis for the Social Sciences: An Interactive Approach*. Allyn & Bacon: Needham Heights, MA.

Recommended:

APA Style Manual (5th Ed.)

D. C. Howell. (2002). *Statistical Methods for Psychology (5th Ed)*. Duxbury Press: Pacific Grove, CA.

Additional materials will be placed on reserve in the library and in the computer lab as needed. Material placed on Reserve may be accessed electronically through Adobe Acrobat as a .pdf file and then printed.

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 will be given at 11:00 on Monday and 2:00 on Tuesday of Finals Week. Students may take the exam at either time. A take-home portion of the exam will be available on Monday morning of Finals Week and is due by 5:00 PM on Thursday of Finals Week.

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 the SPSS for Windows – Version 11.5 program available on Radford's computer system. Students will complete assignments illustrating the computer approach to using 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.