1. ERMA 8330
Non-parametric Statistics
3 credit hours

2. Summer 2011

Meeting Time: 4:00 – 7:50 PM Thursdays
Room: Haley Center 3430
Instructor: Margaret E. Ross
4018 Haley Center
(334) 844-3084 rossma1@mail.auburn.edu (the first 1 = one)
Office Hours: 3:00 – 4:00 PM Thursdays or by appointment

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3. Resources

Siegel, S. & Castellan, N. J. Jr. (newest edition). Nonparamaetric Statistics for the Behavioral Sciences. McGraw-Hill, Inc., New York.

Publication Manual of the American Psychological Association (any recent edition). Washington D.C., American Psychological Association

4. Course Description

This course is designed to provide students the understanding of nonparametric statistical methods pertaining to design and analysis in educational research. Parametric statistics will be reviewed and parallel nonparametric statistics will be compared to the characteristics and uses of the parametric statistics. This course emphasizes the conceptual understanding and application as well as calculations of nonparametric statistics.

5. Course Objectives

Students will:

- Gain an understanding of nonparametric statistics.
- Apply knowledge of nonparametric statistics by analyzing research problems and making decisions about the appropriate use of nonparametric procedures.
- Apply knowledge of nonparametricl statistics using SPSS and/or hand calculations to determine significance.
- Apply knowledge of inferential statistics by interpreting results of statistical analyses.
- Interpret the results of the analyses in terms of the research hypothesis.

6. Tentative Course Content and Schedule

Week 1 May 19
Introduction to the Course/ Overview of Nonparametric Uses
Review of Parametric Concepts

One sample nonparametric tests for nominal or categorical data
Comparison to parametric procedures

Week 2 May 26
One sample tests for ordinal and interval data
Comparison to parametric procedures
Projects – Pairs/Literature Review/Outline

Week 3 June 2
Related two-sample nonparametric tests for nominal or categorical data
Comparison to parametric procedures

Related two-sample nonparametric tests for ordinal and interval data
Comparison to parametric procedures

Week 4 June 9
Independent two-sample nonparametric tests for nominal or categorical data
Comparison to parametric procedures

Independent two-sample nonparametric tests for ordinal and interval data
Comparison to parametric procedures

Week 5 June 16
Related k-sample nonparametric tests for nominal or categorical data
Comparison to parametric procedures

Projects

Week 6 June 23
Independent k-sample nonparametric tests for ordinal data
Comparison to parametric procedures

Projects

Week 7 June 30
Measures of Association
Comparison to parametric procedures

Rubrics for Project
Project

Week 8 July 7
Work Session

Week 9 July 14
Loglinear Regression

Week 10 July 21
Peer Reviews and finalization of Projects
Power Points

Week 11 July 28
Round Tables

7. Course Requirements and Evaluation

Learning Methods
Lectures, discussions, readings, class exercises and lab assignments.

Student Assessment

Assignment/Assessment Notebook	60%
Research Project	35%
Roundtable Presentation*	5%

(Sometimes the lab will double as an assignment You can **make up one lab assignment.**)
***Paper and Presentations** (Pairs)
The following is the outline that will be used for this assignment. You will present the research in round table session format and turn in your accompanying paper (10-12 pages).

Introduction
A. Statement of Problem
B. Significance of problem (based on literature review)
C. Specific research questions to be answered or hypotheses to be tested.
1. Are they clearly stated?
2. Are they feasible/legitimate?
3. Does it lend itself to t-test or ANOVA procedures?

Methodology
A. Full description of participants
B. Measures
C. Procedures (detailed description of what you did – step by step)
D. Data processing and analysis (how will you analyze the data and why)?

Results – If you don't have data, make it up.
A. Are **all** appropriate statistics clearly stated in APA style?
B. Are tables or graphs appropriately used?

Discussion (no more than 1 page)
A. Results in words
B. Statistical Assumptions discussed
C. Limitations discussed

A more detailed rubric will be handed out closer to the time the proposal and presentation are due.
The paper is to be written in APA style.

Grading Scale
A: 90 – 100%
B: 80 – 89%
C: 70 – 79%
D: 60 – 69%
F: below 60%

8. Class Policy Statements

Late Assignments Policy

- Assignments turned in late will receive a 3% reduction in earned points per day. The only exception will be in the case of emergency.
- Except for work requiring calculations, all work must be typed or it will **not** be graded. Late penalty will be applied to work completed in writing and then turned in late in typed format for a grade.

Incompletes and Withdrawals

Grades associated with incomplete course work or withdrawal from class will be assigned in strict conformity to University policy (see Auburn University Bulletin). If you wish to drop this course you may do so by the 10th class day with no grade assignment. From the 10th class day to mid-quarter a W (withdrawn-passing) grade will be recorded in your transcripts. After this period withdrawal from the course will only be granted under unusual circumstances and must be approved by the Dean of the College of Education.

Note that a new incomplete grade (IN) policy is in effect. The new policy requires that students complete a form requesting that an IN grade be assigned. If this form in not completed and given to the instructor of the class, a grade will be assigned with a score of zero (0) for work that has not been completed and turned in by the time the instructor reports grades.

Academic Misconduct

The Department of EFLT recognizes university policy regarding academic misconduct. Violations include, but are not limited to: plagiarism, unauthorized assistance during examinations, submitting another's work product as your own, using another's words as your own without appropriate citation, sharing unauthorized materials with another that contain questions or answers to examinations, altering or attempting to alter assigned grades. In accordance with University policy regarding academic misconduct, students may be subject to several sanctions upon violations of the Student Academic Honesty Code. See the Tiger Cub publication for the current year for specifics regarding academic misconduct as well as student's rights and responsibilities associated with the Code.

Disability Accommodations

Students who need accommodations are asked to arrange a meeting with me as soon as possible. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Haley Center, 844-2096.