Syllabus

Course Number: ERMA 8330

Course Title: Nonparametric Statistics

Semester: Summer, 2010

Credit Hours: 3 credit hours

Prerequisites: ERMA 7300/7306

Meeting Time: Wednesdays 12:00~4:00

Instructor: Chih-hsuan Wang
4013 Haley
wangchi@auburn.edu

Office Hour: Tuesday 2:00~4:00
Thursday 10:00~12:00

Date Syllabus Prepared: June, 2010

Texts:

There is no required testbook.

Recommended:

Siegel, S. & Castellan, N. J. Jr. (1988). *Nonparamaetric Statistics for the Behavioral Sciences (2nd ed.)*. McGraw-Hill, Inc., New York.

Shannon, D. M. & Davenport M. A. (2000). *Using SPSS to Solve Statistical Problems: A Self-Instructional Guide*. Merrill Prentice Hall, Upper Saddle River, New Jersey.

American Psychology Association (2009). *Publication Manual of the American Psychological Association (6th ed.)*. Washington D.C., American Psychological Association.

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.

Course Objectives:

Students will:

- Gain an understanding of nonparametric statistical procedures.
- Apply knowledge of nonparametric statistics by analyzing research problems and making decisions about the appropriate use of nonparametric procedures.
- Apply knowledge of nonparametric 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.

Tentative Course Content and Schedule

Week	Date	Reading & Class activities
2	06/02	Introduction One-sample nonparametric tests for nominal/categorical data Two independent samples nonparametric tests for nominal/categorical data
3	06/09	Article Related two-sample nonparametric tests for nominal/categorical data Correlation nonparametric tests for nominal/categorical data
4	06/16	Article One-sample nonparametric tests for ordinal data Two independent samples nonparametric tests for ordinal data
5	06/23	Article Related two-sample nonparametric tests for ordinal data Preparation for teaching a non-parametric class and presentation of literature in which the statistic was used
6	06/30	Article Independent k-sample nonparametric tests for ordinal data Preparation for teaching a non-parametric class and presentation of literature in which the statistic was used
7	07/07	Presentation
8	07/14	Presentation
9	07/21	Introduction to Logistic Regression
10	07/28	Article Introduction to Loglinear Regression
11	08/04	Article Critique due Article Critique Presentation

Course Requirements/Evaluation

- Learning Methods

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

- Student Assessment

Lab	30%
Finding Articles	10%
Presentation	30%
Article critique	30%

- Lab (30%)
  1. Lab is designed to introduce you to the use of SPSS to complete analyses taught in class. Due to time restraints, it is NOT intended to provide you with enough practice to memorize procedures. You should have reference books to help you complete analyses via SPSS when you do are completing analyses on your own.
  2. Sometimes the lab will double as an assignment and must be turned in at the end of the lab session. In this case, you will need to have the output printed. You can work in pairs on lab assignments and turn in one lab assignment per pair if you wish.

- Attendance

  Points are not attached to attendance directly. However, excellent class attendance is expected. If you need to be absent for school or work-related requirements, illness, or an emergency, you are allowed to make up points for no more than two classes. Students are responsible for initiating arrangements for missed work.

- Grading Scale

  A: 90 – 100%

  B: 80 – 89%

  C: 70 – 79%

  D: 60 – 69%

  F: below 60%

- Finding Articles (10%)

  Students are expected to find an article for each topic in this class. The data analysis technique in this article has to be the method discussed in the previous class. Students are expected to briefly present the research (about 5 minutes) at the beginning of the class.

- Presentation (30%)

  Students are grouped in two or three. They have to pick up one nonparametric data analysis method and teach it in the class. They also have to find an article in which the statistical technique was used and present this article in the class. They also have to teach the lab session.

- Article Critique (30%)

  Students are expected to write an article critique. The data analysis technique in the research article has to be one of the topics discussed in this semester.

Class Policy Statements

Class Attendance

Points are not attached to attendance directly. However, excellent class attendance is expected. If you need to be absent for school or work-related requirements, illness, or an emergency, you are allowed to make up points for no more than two classes. Students are responsible for initiating arrangements for missed work.

Assignment Policy

- Due to the potential incompatibility of word processing programs and formats, and the potential for the transmission of viruses, absolutely no work for the course will be accepted as an E-mail and/or as an E-mail attachment, or on a disk etc. All graded work must be printed off by you and delivered to me in hard copy format.
- All work submitted for the course must be typed.

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.

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 special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with the Program for Students with Disabilities, 1244 Haley Center, 844-2096.

NOTE: This is a tentative syllabus. Any changes will be announced in class. Students are responsible for being aware of the changes made.