CRJ 640
Statistics in Criminal Justice
Spring 2005
Wednesday Night

Instructor: Bobby Moore, Ph.D.
Course Time: Wednesday Night – 6:00 to 9:00 p.m.
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Office Hours: MWF: 8:00 to 9:00; 10:00 to 11:00; 2:15 to 3:00
Wednesday: 3:00 to 4:00
Tuesday and Thursday by Appointment

Textbooks: *Basic Statistical Analysis* by Richard Sprinthall
Adventures in Criminal Justice Research by George Dowdall, Kim Logio, Earl Babbie, & Fred Halley

COURSE GOALS AND OBJECTIVES

This course is a graduate level quantitative analysis course. The materials in this course are designed to prepare the student to engage in statistical data analysis in their professional careers or in their academic endeavors. Upon completion of this course the student will have an understanding of:

- Basic concepts of quantitative data analysis (including measures of central tendency, measures of variability, standardized scores and frequency distributions)
- Inferential statistics comparing differences between means and involving interval and ratio data (techniques to be discussed include: one sample t test, independent samples t test, paired samples t test, Analysis of Variance (1 Independent Variable and 2 Independent Variables), Randomized Block Designs, and Split Plot Analysis of Variance Designs)
- Inferential statistics associated with correlation studies (techniques to be discussed include Pearson's r, Spearman's rho, and Contingency Chi-Square)
- Inferential statistics associated with differences between groups involving nominal data (techniques to be discussed include 1 k Chi-Square analysis and Cross tabulation analysis)
- Basic multivariate techniques and the value these techniques have for future research (techniques to be discussed include Factor Analysis and Linear Regression)

CLASSROOM ATTENDANCE AND PARTICIPATION

This course is a graduate level course and as such there is little need to discuss the importance of classroom attendance. This course expects that students will have completed a basic statistics course and as such the materials will be covered in a manner that expects a basic understanding of statistical analysis. Students who are not in class

will quickly find that they are not capable of keeping up with other students. Additionally, students who are not in class (and have not had their absences addressed beforehand) will not be allowed to contact the professor for outside help on missed assignments. These students will be expected to make up the materials on their own time.

TARDINESS

An individual entering the classroom after class has begun is not only disrupting for the instructor, it is also disrupting for other students. If you arrive to class late and the door is already closed, then do not interrupt the class by coming in. Arriving late will still count as one of your allotted absences. If you have a continuous problem that will result in your being late for class, please see the professor as soon as possible.

GRADING

Each student's grade for this course will be computed using a combination of test scores and the student's grade on assigned statistical analysis problems.

EXAMS:

There will be two examinations in this course. Each examination will consist of 100 points. Questions for this examination will be short answer, fill-in-the-blank and interpretation of SPSS outputs. Examinations will account for 80% of the student's final average.

HOMEWORK ASSIGNMENTS:

Each week students will be assigned a practice analysis problem that will require the student to access a data file, run a statistical analysis utilizing SPSS, and interpret the outputs in both statistical language and English. These assignments will be due at the beginning of the first class meeting after the assignment has been made. Homework assignments will account for 20% of the student's final average.

ACADEMIC DISHONESTY

Any student caught cheating on an examination or their homework problems will receive a grade of "F" for the course. Additionally, the student will be referred to the Dean of Student Affairs, with the possibility of the student being dismissed from their academic program and/or dismissed from Delta State University.

GRADING SCALE:

90 to 100 – A
80 to 89 – B
70 to 79 – C
60 to 69 – D
< 60 – F

STUDENTS WITH DISABILITIES
If a student has a disability that qualifies under the Americans with Disabilities Act and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures.

Tentative Schedule
Spring 2005

Week One:
January 12
Introduction to the Course and the Instructor

Week Two:
January 19
Review of Undergraduate Statistics and Terminology
Chapter One – Babbie Text
Chapter One – Sprinthall Text
Chapter Two – Sprinthall Text
Chapter Three – Sprinthall Text

Week Three:
January 26
The Concept of the Normal Curve and the Comparison of Means
Requirements for utilizing a t test
t testing – One Sample t Test and Independent Samples t test
Chapter Four – Sprinthall Text (Section on Normal Curve)
Chapter Eight – Sprinthall Text
Chapter Nine – Sprinthall Text
Chapter Nine – Babbie Text (Section on t testing)

Week Four:
February 2
ANOVA – Analysis of Variance; Theory of technique and assumptions
One Way ANOVA
Chapter Twelve – Sprinthall Text
Chapter Nine – Babbie Text (Section on ANOVA testing)

Week Five:
February 9
Two Way ANOVA – Theory of technique and assumptions
Lecture Notes

Week Six:

February 16

Correlation Analysis – Theory of techniques and assumptions
Pearson's r and Spearman's rho
Chapter Eleven – Sprinthall Text
Chapter Seven – Babbie Text
Chapter Eight – Babbie Text

Week Seven:

February 23

Comparing Differences among Nominal Data – Theory of Chi-Square and assumptions
Chi-Square Analysis and Crosstabulation Analysis
Chapter Thirteen – Sprinthall Text
Chapter Nine – Babbie Text (Section on Chi-Square)

Week Eight:

March 2

Wrap Up Section One and Review for Examination One

Week Nine:

March 9

Examination One

Week Ten:

March 16

No Class; Read Ahead to Upcoming Techniques

Week Eleven:

March 23

No Class Because of Spring Break

Week Twelve:

March 30

Repeated Measures Design – Theory and Assumptions
Randomized Block Analysis of Variance
Chapter Fifteen – Sprinthall Text

Week Thirteen:

April 6

Split Plot Analysis of Variance
Lecture Notes

Week Fourteen:

April 13

Regression Analysis – Theory and Assumption of Technique
Simple Linear Regression Analysis
Chapter Fourteen – Sprinthall Text
Chapter Eight – Babbie Text (Section on Regression Analysis)

Week Fifteen:

April 20

Multiple Linear Regression Analysis (2 or more Independent Variables)
Chapter Ten – Babbie Text

Week Sixteen:

April 27

Factor Analysis – Theory and Assumptions of Techniques
Lecture Notes

Week Seventeen:

May 4

Final Examination