

Southeast Missouri State University
CJ 626-70

Title of Course: Statistical Analysis in Criminal Justice

Descriptions and Credit Hour of Course:

The use of statistical methods and computer applications for research and program analysis in criminal justice. (3)

Nature and Scope of Course

This class focuses on the use of statistical techniques with an emphasis on data collection and measurement of validity and reliability. This course is designed to assist students understand and interpret the analysis of data on criminal justice/criminological issues. Course will explore statistics in the context of theory and methods of the social sciences. The overall goal of this course is the development of an understanding of the various statistical applications used in criminal justice research an ability to use SPSS to perform all statistical applications.

Prerequisites:

Graduate standing.

Objectives of the Course

1. To lay a foundation for understanding statistics
2. Review basic methodological concepts and become familiar with the measurement process that is used in statistics to generate and analyze data
3. To learn commonly used descriptive and inferential statistical techniques and to think using the logic of statistics.
4. To apply these techniques in describing and analyzing data (others' research and one's own research)
5. To recognize sound/good statistical studies
6. To gain an appreciation for analytical skills
7. Create and interpret statistical graphs and charts for distributions and relationships
8. Calculate descriptive measures for distributions and relationships
9. Understand and use probability concepts appropriately

Grading

There will be a total of 550 points for this course based upon the following requirements:

- 10 small assignments (worth 10 points each). All assignments are to be submitted as a portfolio due the last day of class (totaling 100 points). **When you complete an assignment, keep it all in the same file to submit as a portfolio at the end of the term.**
- **Two exams (100 points each)**
- **Chapter Presentations (50 points)**
- Student participation will take on the form of posting to class website forums. There will be a link each week to on-line forums and chat rooms through website. (50 points). Each week, there will be a list of discussion questions added to forums. All students must post questions/answers/comments to the forum 3 times per week as participation.
- Research Proposal (to include IRB proposal). (Worth 100 points)
- Group work: coding and interpreting data (50 points)

Grading Scale

- A
- B
- C
- F

Tentative Schedule (subject to change)**Week 1-2 (Introduction to course)**

Off Book—Importance of Statistics for CJ Majors
 Grasp of research basics as essential to understanding importance of statistics
 Introduction to SPSS & SPSS Basics
 Research Proposals Assigned
 Coding Data

Week 3 Chapter 1: Purpose of Statistics in Criminological Sciences
 Chapter 2: Levels of Measurement and Aggregation

Week 4 Chapter 3: Understanding Data Distributions: Tabular and Graphical Techniques
 Group Presentation (Group 1)

Week 5: Measures of Central Tendency
 Group Presentation (Group 2)

Week 6: Measures of Dispersion
 Group Presentation (Group 3)

Week 7: Work on Proposals

Week 8: Review and Exam One

Week 9: Chapter 6: Probability and Intro to Hypothesis Testing
 Group Presentation (Group 4)

Week 10: Chapter 7: Point Estimation and Confidence Intervals
 Group Presentation (Group 5)

Week 11: Chapter 8: From Estimation to Statistical Tests: Hypothesis Testing for One Population Mean and Proportion
 Group Presentation (Group 6)

Week 12: Chapter 9: Testing Hypotheses with Categorical Data
 Group Presentation (Group 7)

Week 13: Chapter 10: Hypothesis Testing Involving Two Population Means or Proportions
 Group Presentation (Group 8)

Chapter 11: Hypothesis Testing Involving Three or More Population Means: Analysis of Variance.
 Group Presentation (Group 9)

Week 14: Chapter 12 Bivariate Correlation and Regression
 Group Presentation (Group 10)

Week 15: Chapter 13: Controlling for a Third Variable: Multiple Regression and Partial Correlation

Week 16: Presentations of Research Proposals

Final: To Be Announced

Required Texts:

Bachman, R. & Paternoster, R. (2008). Statistical Methods for Criminology and Criminal Justice. McGraw Hill Publications.

Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.

Academic Misconduct Policy

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to: [http://www6.semo.edu/judicial affairs/code.html](http://www6.semo.edu/judicial%20affairs/code.html)