**CCJ 6714 – Advanced Quantitative Methods in Criminal Justice**
**Fall Term 2009**
**Thursday 6:00 – 8:50 pm**

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## Course Description

Application of multivariate linear and nonlinear statistical techniques to criminal justice issues. Focus is on selecting appropriate procedures, computer-based analysis, and interpreting and applying results.

## Objectives

Upon completion of this course, students will be prepared to:

- Assess data suitability for analysis
- Manipulate data to produce high-quality conceptual measures
- Select appropriate bivariate and multivariate statistical techniques
- Produce statistical computer output
- Interpret the results of multivariate statistical computer output
- Present advanced statistical results in a scholarly format, using tables and text

## Text and Materials

Norusis, M. J. (2009). *SPSS 17.0 Statistical procedures companion.* Upper Saddle River, NJ: Prentice Hall.

Additional readings will be available for download in PDF format on my website.

Recommended Software: Those students who do not own SPSS and do not wish to use the version available on the University's local area network (LAN) should purchase the SPSS Grad Pack (You may find it called "PASW Statistics GradPack). It is available at the UCF computer store ($199).

## Requirements

- Assignments – several assignments will be required during the semester. They will reinforce concepts and techniques discussed in lecture.
- Final Exam – a comprehensive final examination will assess student understanding and ability in relation to meeting the course objectives.
- Class Involvement – all students are expected to prepare for, attend, and actively participate in class throughout the term.

## Grading

Grades will be based on the following weighting of requirements:

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|---|---|
| Final Exam | 50% |
| Assignments | 35% |
| Class Involvement | 15% |

Letter grades will follow this scale:

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|---|---|---|---|---|---|
| A | 91-100 | B- | 76-79 | F | 0-63 |
| A- | 88-90 | C | 67-75 | | |
| B | 79-87 | C- | 64-66 | | |

**Schedule**

| Date | Topic | Readings |
|---|---|---|
| Aug 27 | Introduction, Review of Basic Quantitative Methods | Norusis 6-10 |
| Sept 3 | Correlation, Partial Correlation | Norusis 11 |
| Sept 10 | Bivariate Regression | Norusis 12 |
| Sept 17 | Independent Work | |
| Sept 24 | Multivariate Regression | Norusis 13 |
| Oct 1 | Multivariate Regression | Norusis 13 |
| Oct 8 | Regression with Dummy Variables & Interactions | |
| Oct 15 | Logistic Regression | Norusis 15 |
| Oct 22 | Index Construction | Norusis 18 |
| Oct 29 | Factor Analysis | Norusis 17 |
| Nov 5 | Multivariate Data Analysis | |
| Nov 12 | Hierarchical Linear Modeling | |
| Nov 19 | Structural Equation Modeling | |
| Nov 26 | Thanksgiving – No Class | |
| Dec 3 | Structural Equation Modeling | |
| Dec 10 | Final Exam | |