EDF 6403
Quantitative Foundations of Educational Research

Course Information

Name:	EDF 6403
Time:	Periods 9-11
Room:	NRN 292
Prerequisite:	An introductory statistics class

Instructor Information

Professor:	Anne Seraphine, PhD
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Office:	1216 Norman Hall
Office Hours:	By appointment

Objectives

The objective of this course is to cover a variety of introductory topics in applied statistics, research methods, and design. The goal is to provide learning experiences that help you understand, apply, and interpret a variety of statistical methods and research designs commonly used in educational research. Through the use of course readings, lectures, assignments, and take-home exams, you will have the opportunity to construct a conceptual schema that should enable you to apply the concepts and ideas offered in this course to your own and others research.

Course Website

Course Website is on CANVAS under our class section. It is a repository for class materials. The materials within each topic or week are organized as follows: LECTURE (lecture slides), SPSS (SPSS examples), EXERCISES (in class and at home practice exercises), and GUIDES (SPSS Guide for different Analyses and Data steps). You are expected to bring materials from these categories for class. Many students select to bring tablets or laptop computers rather than print out these materials for class.

SPSS Statistical Software

Access to SPSS software is required for this course. It is used for lecture and the completion of assignments. It is BEST to rent the software, which will cost from $30 to $60. (The whole year is about $30, but unfortunately, you'll only get a part of the year because the rental year begins sometime in late fall—so you may have to $60 overall to finish out our course. But this is probably NOT the place to cut costs!!!).

Course Texts and Readings

Myers, J. L., Well A. D., & Lorch R. F., Jr. (2010). *Research design and statistical analysis.* (3rd ed.). New York & London: Routledge.

Dooley, D. (2001). *Social research methods*. (4th ed.) Upper Saddle River, NJ: Prentice Hall.

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.) Thousand Oaks, CA: Sage Publications.

Cook, T.D. & Campbell, D.T. (1979). *Quasi-experimentation: Design & analysis issues for field settings.* Boston: Houghton Mifflin (Chapter 2—library reserve)

Course Requirements

Computer Assignments:	There are NINE computer exercises due throughout the semesters. See file under course introduction: Computer Assignment Exercises 1 – 9 REVISED. Each student will submit a typed APA report that addresses the topics listed under the heading, REPORT, for that particular computer exercise. The final due date for all exercises is on the last day of class. You, however, are advised to submit the exercises for feedback and a grade as we finish that particular topic. For those exercises submitted before the last week of classes, a grade will be assigned, which can be changed ONCE with a revision of the report. Each student is required to complete each exercise without assistance from others.
Exams:	Three non-cumulative out-of-class exams for the semester. Review guides will be posted on the course website prior to the exams. A review session will be offered during class.
Exercises:	No grade will be assigned to in-class or out-of-class exercises. Nonetheless, students prefer to complete these exercises, because such practice facilitates an understanding of concepts, ideas, and procedures.

Course Grades

Exams and computer assignments will be graded on a percentage correct scale. The grade will be a weighted composite as follows:

FINAL GRADE = .25(EXAM 1) + .25(EXAM II) + .25(EXAM III) + .25(COMPUTER EXERCISES AVERAGED)

Grades will be assigned in the following manner:

GRADE	Weighted Composite
A	90--100
B+	85---89
B	77---84
C+	72---76
C	64---71
D+	60---64
D	52---59
E	51 or less

Class Attendance

As a matter of mutual courtesy, please let me know when you are going to be late, miss a class, or need to leave early. These should be the exception rather than the rule! Students are expected to present for all classes, because the material will be covered just once in class. Students, who face extraordinary circumstances, resulting in missed classes, late arrivals, or early departures; should contact the instructor as soon as possible. The instructor then will make an effort to accommodate all reasonable requests. Attendance is not checked or graded, but you are still responsible for the content of all classes, including issues and topics raised in spontaneous class discussions. If you must miss a class, please request notes from your classmates.

Missed Work and Extra Credit

Missed Work: It is expected that NO student will miss any due dates for course assignments or exams. **Each day that a graded requirement for the class is late without prior instructor approval will result in a ten percent point deduction.** For example, if a student earns a 100% on an assignment, the grade will drop to a 90% if one day late, 80% if two days late, and so on. Unavoidable absences resulting in missed work may be excused by the instructor, provided an official documentation of the excuse. Excuse of absence can only be achieved in private consultation with the instructor, and will require written supportive documentation (e.g., doctor's certificate).

Extra credit: NO planned opportunities for extra credit exist in this course.

Academic Dishonesty

The University of Florida Student Honor Code and Conduct Code can be found at http://www.dso.ufl.edu/sccr/honorcodes/conductcode.php. All students must abide by these codes.

The honor codes states,

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the university, the following pledge is required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

Tentative Schedule

Date	Topic	Readings
Week 1	Introduction Descriptive Statistics	M, W, & L Chapter 1, 2
Week 2	Inferential Statistics & Correlations	M, W, & L Chapter 5 & 18
Week 3	Independent and Dependent Samples t tests	M, W, & L Chapter 6
Week 4	ANOVA one way	M, W, & L Chapter 8
Week 5	ANOVA one way and follow-up	M, W, & L Chapter 8 & 10
Week 6	**Review and Exam 1**	
Week 7	ANOVA two-way and follow-up	M, W, & L Chapter 9 & 10
Week 8	Follow-up Multi-factor issues Three-Way ANOVA	M, W, & L Chapter 9
Week 9	Repeated Measures One-way and two-way	M, W, & L Chapter 9 Chapter 14
Week 10	Split Plot Designs	M, W, & L Chapter 15
Week 11	**Review and Exam 2**	
Week 12	Regression and ANCOVA	

Date	Topic	Readings
Week 13	Statistical Conclusion Categorical Analyses	
Week 14	Construct Validity External Validity	
Week 15	Internal Validity Parts one and two	
Week 16 December 8	**Review and Exam 3**	