

**EDF 6402 — Quantitative Foundations of Educational Research: Inferential
Statistics
Spring - 2009**

Time:

Tuesdays 5:10 - 8:10 pm *Room:* Norman 0270

<i>Professor:</i> Dr. Walter Leite <i>Office:</i> Norman Hall 258B <i>Phone:</i> 352-392-0723 extension 240 <i>E-mail:</i> walter.leite@coe.ufl.edu	<i>Office Hours:</i> Mondays and Wednesdays 2:00 - 5:00 pm Or by appointment
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Course Description

This course is designed to cover topics in applied statistics. The prerequisite for this course is EDF6400 or equivalent.

Course Goal

The goal of this course is to provide learning experiences that help you understand, apply, and interpret a variety of statistical methods commonly used in educational research (see Calendar of Topics and Readings for the list of methods). I believe the best way to achieve this goal is by building a conceptual schema for applied statistics. One way I attempt to facilitate this is by introducing statistical concepts by using research design and research examples.

Required Book

- Field, Andy (2005). Discovering Statistics Using SPSS. Sage Publications. ISBN 0-7619-4452-4

Course website

The course website is part of the E-learning system. To log in, go to lss.at.ufl.edu. The Powerpoint presentations used during the lectures will be made available on the web page after each lecture. Course assignments and data sets will also be

posted on the website. Occasionally supplemental course readings will be made available.

Computer labs on campus with SPSS

Norman Hall Circa Lab (only PC computers have SPSS)

Room: G512 (under the library)

Hours:

Monday to Thursday - 7:30 am to 10 pm

Friday - 7:30 am to 5 pm

Saturday and Sunday - closed

Architecture 118 - open 7 days/week 24 hours/day - Located on the first floor of the Architecture building facing Inner Road.

CSE E211 Lab - The CSE (Computer Science and Engineering) Building is located directly behind the Hub. CSE faces Newell Drive and is across the street from the Century Tower. The lab is on the ground level in room 211.

Weil 408 Lab - Located across the street from the Florida Gym on Stadium Road.

When working on computer labs, always keep your files in a flash drive. I have seen many students who lost their work because they kept it in the computer's hard drive.

Those wishing to use SPSS at home will need to purchase the Graduate Pack of SPSS from the University Bookstore or from <http://e-academy.com>. (Note: the SPSS "Student Version", which costs half as much as the Grad Pack, is NOT SUFFICIENT. It does not include all the procedures, nor does it allow enough variables for some of our exercises. The Student Version is meant for use in undergraduate, not graduate, classes).

Course Assessment

Exams: There will be **two in-class exams**, with open-ended questions. The exams will not be cumulative.

Homework exercises: Homework exercises will be assigned following most lectures, and should be handed to the instructor at the beginning of the next class day. Homework exercise can be printed or neatly handwritten. If a homework exercise requires calculations, present all steps of the calculations. Partial credit will be given for each homework exercise depending on how much correct information is presented. Late homework is not accepted unless special arrangements are made in advance with the instructor.

Homework resubmission policy - Sometimes students perform poorly on a homework exercise because of misunderstandings of the instructions and/or the response expectations. Therefore, I will permit students to make one resubmission of a single homework exercise. There is no guarantee that the re-grading will receive a higher grade, although a grade increase is highly likely. Of course, grades are not everything, so we would encourage students to seriously weigh the need to resubmit. Use the single resubmission option only if you feel you need to prove that you are capable of a better performance. That said, if you wish to re-complete other assignments for discussion and review with the instructor, you are welcome to do so throughout the year.

SPSS exercise sets: There will be two SPSS exercise sets. These exercises will require the student to analyze data using the statistical methods addressed in class and provide a typed report in APA format. The inclusion of a table of descriptive statistics and an ANOVA table in Word format (not an SPSS table) is required for all exercises, except the ones where chi-square is used (in this case, tables of observed frequencies and percentages are required), or non parametric methods. SPSS exercise sets should be printed and handed to the instructor at the beginning of the class of the due day. Late SPSS exercise sets are not accepted unless special arrangements are made in advance with the instructor.

<i>Assessment</i>	<i>weight</i>
Homework questions:	30%
Exam #1:	25%
Exam #2:	25%
SPSS exercise set 1:	10%
SPSS exercise set 2:	10%

Course Grades

Final grades will be assigned based on the scale below:

<i>Overall course percent</i>	<i>grade</i>
90.0% - 100%	A
85% - 89.9%	B+
80.0% - 84.9%	B
75% - 79.9%	C+
70.0% - 74.9%	C
65% - 69.9%	D+

Unless a computational error has been made, grades will not be changed after the end of the semester.

Class Attendance

As a matter of mutual courtesy, please let the instructor know when you're going to be late, when you're going to miss class, or if you need to leave early. Please try to do any of these as little as possible. Students are expected to be present for all classes, since much material will be covered only once in class. Students who have extraordinary circumstances preventing attendance, or who must leave early, should explain these circumstances to the course instructor prior to the scheduled class, or as soon as possible thereafter. The instructor will then make an effort to accommodate reasonable requests. Attendance will not be checked or graded, but you are responsible for the content of all classes, including issues raised in the spontaneous class discussions. If you must miss a class, please request notes from your classmates.

Academic dishonesty

For University's honesty policy regarding cheating and use of copyrighted materials, see: <http://www.dso.ufl.edu/judicial/procedures/honestybrochure.php>

Written assignments will be checked for plagiarism against published works, other papers submitted by classmates at the current and previous semesters and internet pages using Turnitin, which is UF's plagiarism detection software. It is expected that submitted work will solely reflect the student's own efforts. Students are expected not to collaborate in writing answers, or interpreting results. However, collaborations in running statistical software are acceptable, as long as each student works on his/her report separately.

Make-up Exams or Other Work:

Extra credit - No planned opportunities for extra credit exist in this course.

General policy on missed work - It is expected that no students will miss any assignments or in-class tests/exams. No make-ups will be possible. Assignments not turned in by their due date will not be considered for grading, and will be assigned a failing grade of zero (0). In unusual circumstances, unavoidable absences resulting in missed work may be excused by the instructor. Excuse of absence can only be achieved in private consultation with the instructor, and will usually require written supportive documentation (e.g., doctor's certificate). When in doubt, check with the instructor, preferably IN ADVANCE.

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (<http://oss.ufl.edu/>). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services,

352-392-1171. Visit their web sites for more information:
<http://www.counsel.ufl.edu/> or
<http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: www.health.ufl.edu/shcc

Crisis intervention is always available 24/7 from:

Alachua County Crisis Center: (352) 264-6789.

Calendar of Topics and Readings

Following are the topics to be covered during the semester and the readings that students are expected to be doing, whether or not the material is explicitly addressed on the date indicated. I may include additional readings at any point of the semester.

1/6/09 - Presentation of the syllabus, review of the final exam of EDF6400

1/13/09 - Chapter 8 - Comparing Several Means: ANOVA

1/20/09 - Chapter 8 - Comparing Several Means: ANOVA

1/27/09 - Chapter 10 - Factorial ANOVA

**2/3/09 - Chapter 10 - Factorial ANOVA
Shavelson, chapter 14, pages 431-438 (available on the class website).**

2/10/09 - Chapter 11 - Repeated Measures Designs

2/17/09 - Chapter 12 - Mixed Design ANOVA

2/24/09 - Chapter 9 - Analysis of Covariance, ANCOVA

3/3/09 - Exam 1

3/10/09 - SPRING BREAK

**3/17/09 - Chapter 5 - sections 5.1-5.4 - Regression
SPSS EXERCISE SET 1 DUE**

3/24/09 - Chapter 5 - sections 5.5 to 5.11 - Multiple Regression

3/31/09 - Chapter 13 - Non-Parametric tests

4/7/09 - Chapter 16 - Categorical data

**4/14/09 - Review
SPSS EXERCISE SET 2 DUE**

**4/21/09
EXAM II**