

EDP 660, Sec. 401, Fall 2003

Instructor: Lise DeShea, Ph.D.
Office hours: 3-4 Tu, 4-5 p.m. Th & by appt
Class meets: 6:45-9:15 p.m. TEB 140

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EDP 660, Research Design and Analysis in Education, is a course intended to give you an introduction to experimental designs and statistical procedures that are used in educational psychology and other social sciences. Successful completion of one prior course in statistics, such as EDP/EPE 557, is required. Students are expected to have a working knowledge of basic statistics (through two-sample statistics); a pretest on this content will be given on the first day of class. If your performance indicates that you may have trouble succeeding in this course, you will be notified before the next class meeting. We will use computers to run the statistical package SPSS to analyze data. We will discuss the appropriate uses of the designs and procedures, statistical assumptions and their violation, and the interpretation of results.

Evaluation of performance:

1. There will be five 25-point quizzes. The lowest one will be dropped. The remaining four quizzes will be worth one-fourth of your final grade. All quizzes and exams are cumulative.
2. The midterm exam will be worth 100 points, or one-fourth of the final grade.
3. A number of homework assignments will be collected during the semester based on data analysis completed in class using SPSS. Students will answer questions about the computer output, write explanations of results, and turn in their answers and their output. The homeworks will be worth a total of 100 points, or one-fourth of your final grade.
4. The final exam will count for 100 points, or one-fourth of your final grade.
5. Final grades are determined by the usual breakdown of 90-100%=A, 80-89%=B, 70-79%=C, <70%=E.

Other activities:

- You will be given several activities to enhance your learning. Some will be homework assignments, which count toward your grade, and those assignments will be clearly labeled as Homework. You will be expected to complete other assignments, such as reading journal articles distributed in class or via the website.
- Two books have been chosen to support the material covered in this course:
 - *Introductory Statistics for the Behavioral Sciences*, 2nd Ed. This book is out of print but available at Johnny Print in two packets. The first packet is the portion of the book used in my EDP/EPE 557 classes. The second packet is the rest of the book. (You may not need to buy the first packet.)
 - *From Numbers to Words: Reporting Statistical Results for the Social Sciences*, which will be used to support homework. Minimal material from this book will appear on quizzes/exams. I suggest reading my review of this book at www.ed.asu.edu/edrev/reviews/rev142.htm.

Necessary announcements:

1. Attendance is expected. If you know in advance that you must miss a class meeting (for example, because of a religious holiday), please notify the instructor in advance and arrange to make up any missed activities, and please arrange with a classmate to provide the notes from class. Among the university's recognized acceptable reasons for missing class are serious illness; illness/death of a family member; university-related trips; and major religious holidays.
2. If you must miss a quiz for one of the recognized reasons listed above, you have the option of either dropping that quiz as your lowest one or taking a generic makeup quiz toward the end of the semester (exact date to be announced in lecture).
3. Cheating and plagiarism will not be tolerated and will be prosecuted according to the university's regulations against academic misconduct.
4. If you have a disability that may affect the demonstration of your knowledge, please see the instructor to make any arrangements necessary to assure your fullest participation and optimize your academic experience.
5. The College of Education at UK has adopted the model of "Professional Educator as Reflective Decision Maker" as the conceptual framework for its professional education programs. You may read more about this conceptual framework on UK's website, www.uky.edu/Education/NCATE.

Resources to Help You

1. There is a study guide that goes with the textbook. I have put a copy of the study guide on reserve in the Education Library on the second floor of Dickey Hall, plus I have given Johnny Print a copy of the study guide, which you can buy. (The copyright has reverted to my co-author and myself, so we are not violating any laws.)
2. I have a webpage for my stats students: www.uky.edu/~ldesh2/stats.htm has links to several websites. Some of these websites will give you another way of looking at the same ideas, as well as interactive demonstrations of concepts. You'll also see a link to a page specifically for this course, where I have loaded copies of several old quizzes and exams so that you can see how I will evaluate your performance. The quiz numbers won't correspond perfectly to the material that we might have on a quiz with the same number, so be sure to look for relevant information on a variety of exams. (For example, what would be on our Quiz 3 might have been on Example Quiz 4, and you may find additional items on the Example Midterm and Final that cover the Quiz 3 material.)
3. Another resource on reserve in the Education Library is a CD-ROM called "Statistics for Research," which contains exercises (written by my co-author) that correspond to chapters in our textbook.
4. I will give you a copy of the quiz key immediately after everyone has finished a quiz. This allows students to learn immediately what they might have misunderstood.
5. There is an office that provides tutoring. See the webpage www.uky.edu/Education/OeRGShom.htm – plus I can provide names of tutors if you want to hire someone.

Sometimes students ask for a review sheet for the final exam. Don't.

How to study statistics: I don't see how people can succeed in a class like this without doing some memorization. Learning statistics is like learning a language; you cannot begin to understand the concepts if you don't have some basic vocabulary, and statistics is the language of quantitative research. I aced my first (and most subsequent) stats course, and here's what I did:

1. I read the book.
2. I did the exercises in the study guide.
3. I studied old quizzes.
4. I made flashcards (I'll explain).
5. I asked questions – I went to see the instructor (this was back in the day before email), I asked questions in class, I made sure I understood why I missed certain items on quizzes/homeworks, etc. As an instructor, I cannot read your mind. I cannot tell what you find confusing unless you tell me.
6. I made sure that I could explain the ideas to another person without looking at my notes (recall vs. recognition).

EDP 660, Sec. 401, Fall 2003 – **VERY** Tentative schedule of events

Numbers in **bold**: Chapters in the red textbook. Some pages may be excluded from the assigned chapters; listen for announcements in class.

Numbers in *italics*: Chapters in the small brown book.

Wk.	Date	Event	Readings	Topic
1	Aug. 28		Ch. 1, 2 <i>Ch. 1</i>	Intro to 660; pretest over prior statistical knowledge; data collection
2	Sep. 4		Ch. 9-13	Review of some material from 557
3	Sep. 11	Q1	Ch. 11-13 <i>Ch. 2</i>	Confidence intervals and effect sizes, journal article reporting style; multiple regression
4	Sep. 18		Ch. 7 <i>Ch. 5, maybe handout</i>	Multiple regression
5	Sep. 25	Q2	Ch. 14 <i>Ch. 3, Ch. 7 to p. 65</i>	Multiple regression, continued; one-way ANOVA
6	Oct. 2		Ch. 14, 15	One-way ANOVA, continued; multiple comparison procedures; two-way ANOVA
7	Oct. 9	Q3	Ch. 16 <i>Ch. 8</i>	Two-way ANOVA, continued
8	Oct. 16		<i>Ch. 4, handout</i>	Measurement issues
9	Oct. 23	Midterm exam*		
10	Oct. 30		Ch. 17	Simple repeated measures designs Groups-by-trials RMDs
11	Nov. 6	Q4	Ch. 17	Simple repeated measures designs, continued; groups-by-trials RMDs
12	Nov. 13		Ch. 17	Groups-by-trials RMDs, continued.
13	Nov. 20	Q5	Ch. 18-19 <i>Ch. 6</i>	Chi square (if time allows)
	Nov. 27		no class	Thanksgiving ☺
14	Dec. 4		handout	Analysis of covariance (ANCOVA) (if time allows)
15	Dec. 11		Ch. 20, handout	Choice of correct statistic
16	Dec. 18	Final exam		

* There is a small chance that I will need to put off the midterm exam to Oct. 30. In that case, the schedule will shift forward by one week – Q4 would be Nov. 13, and Q5 would be Dec. 4. I will let you know by the first of October whether the midterm will be on Oct. 23 or Oct. 30.