EDUCATIONAL RESEARCH & STATISTICS (EDRS 6319)
Quantitative Research Methods II
SPRING 2014
The University of Texas at El Paso

Professor: Penelope Espinoza, Ph.D.
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ppespinoza@utep.edu

Office Hours: Wednesday & Friday, 1 pm—2:30 pm. To schedule an in-person or online meeting outside of these hours, please email me to arrange a meeting time.

Class meetings: Thursdays, 5:15-7:50 pm; Education Bldg., Rm. 907

Technology-enhanced course utilizing Blackboard: Blackboard will be used to provide course materials and to facilitate communication between the instructor and students. You need a UTEP username and password to log into Blackboard at https://my.utep.edu/. For technical assistance with accessing Blackboard, please contact the UTEP Helpdesk (747-5257, helpdesk@utep.edu).

Course materials
Textbook: Gravetter, F. & Wallnau, L. Statistics for the Behavioral Sciences. (9th or earlier edition is acceptable.)

Other Statistical Texts You May Prefer (OPTIONAL):


Grimm, L. G. Reading and Understanding Multivariate Statistics.

Statistical software: Some work in the course may involve using a common statistical software package, Statistical Package for Social Scientists (SPSS). It is available on computers in the classroom and in UTEP computer labs. You are NOT required to purchase the software for your personal use. Yet, if you plan to use quantitative data in your dissertation research, you may want to familiarize yourself with SPSS beyond what we do in class this term.

One way of accessing SPSS from your personal computer has been implemented by UTEP’s Technology Support. Through a remote server, you will be able to access from your own computer a virtual desktop with SPSS and other programs normally available on UTEP computers. To do this, visit https://my.apps.utep.edu/Citrix/MyAppsWeb/ and follow the instructions.

Relatedly, you may find it useful to refer to a text for assistance in using SPSS, but it is NOT required for the course. Be aware that there are many other similar books on the market and these are only some examples.
Course description.
This course is the second course in the quantitative research methods series offered in the Educational Leadership & Foundations doctoral program. As such, this course is a continuation of the learning objectives set forth in Quantitative Research Methods I, listed below. Additionally, more advanced statistical methods will be reviewed, along with extended practice in analyzing and interpreting statistical analyses.

Emphasis is placed on the ability to critically evaluate methodological and statistical aspects of quantitative research studies, in order to be a responsible investigator or consumer of research. Special attention will be placed on preparation to conduct quantitative education research for the dissertation.

Learning objectives. This course aims to guide students toward attaining the following learning objectives: (1) comprehension of quantitative research concepts and procedures; (2) knowledge regarding the design, analysis, and interpretation of quantitative research; and, (3) appreciation for the importance of research in the field of education.

Course policies. Please observe the university’s academic regulations outlined in the UTEP Graduate Catalog (http://catalog.utep.edu/index.php), in addition to more detailed course policies described below.

Attendance Policy: Full attendance is expected; missing more than two classes will result in a significantly lower grade or being dropped from the class (depending on the number of absences and quality of class participation). Prior notification of absence is expected if possible, but will not necessarily excuse your absence from being counted against you; each absence will be reviewed on a case-by-case basis. Class interruptions, such as late arrivals, early departures, answering phone calls, sending/receiving electronic messages, or using computers for non-course-related purposes are highly discouraged.

To verify attendance, students will turn in to the instructor a short quiz taken at the start of each class meeting. Quizzes will be evaluated as proof of attendance, and answers will be discussed in class. If you miss the quiz due to late arrival, you must turn in a sheet of paper with your name and the word "late" in order to receive credit for attendance.

Academic Integrity: Students are expected to demonstrate academic integrity in two respects: (1) proper citation of informational sources in written and orally presented work; and (2) unless otherwise stated, completion of all work individually, such that submitted work is original to each student. In more practical terms, for every assignment each student should (1) follow APA guidelines on citing sources, and (2) compose work in his/her own words according to his/her own interpretation of the material. Independent work allows the instructor to assess each student’s level of understanding of course material. Students may discuss course material prior to completing assignments in order
to facilitate an understanding of concepts, but students should work on assignments separately to avoid submission of work identical (or nearly so) in part or in whole. Submitting work from outside sources that is not your own similarly constitutes plagiarism. Please refer to resources provided by the University Writing Center (http://academics.utep.edu/writingcenter) under the heading “For Students - Research & Citation - Citing research & Avoiding plagiarism”.

**Grading Policies:** For each assignment, a set of written instructions will be provided that describes the expected content, structure, and format. Grades for assignments will reflect adherence to these instructions, as well as accuracy and quality of content. Grading rubric for the assignments and final project are available on Blackboard.

**Late work:** No higher than a B can be earned on an assignment that is one week overdue. In other words, the assignment will be graded starting at a “B” and additional points will be lost for incorrect, incomplete, or unsatisfactory responses, as outlined in the assignment rubric.

I will not review a student’s assignment for errors prior to submission of the assignment for a grade, which amounts to “pre-grading.” In other words, when asking for assistance with assignments, students must come prepared to the instructor with specific questions, not general requests to review work. Similarly, I will not review drafts of papers outside the context of a meeting to discuss specific questions about the paper. This policy is set in order for me to provide equivalent feedback to all students in the course.

I will assign an “Incomplete” for the course only under the conditions described in the UTEP Graduate Catalog (http://catalog.utep.edu/index.php).

Final grades of A, B, C, and lower will be assigned according to the number of points earned in the course, as shown in the section below on “Evaluation.”

**Requirements.** In addition to mandatory class attendance, as described above in "Course policies," students will be evaluated on completion of the assignments and the final project described below. Further instructions and guidelines will be posted on Blackboard.

**Evaluation:**

*Exercises (6) at 10 points each = 60 points*

*Final project: Research proposal (20 points) & presentation (10 points) = 30 points*

*Course evaluation = 5 points*

*Review quiz = 5 points*

*Total points = 100*

**Grading scale:**

- *A = 100-90%*
- *B = 89-80%*
- *C = 79-70%, etc.*
Assignments: Course assignment instructions will be posted on Blackboard. Assignments will ask students to evaluate research and/or interpret data. The goals of the assignments include: to comprehend the key components of quantitative educational research; to critically evaluate educational research design; to understand the purpose and application of statistical procedures; and, to gain familiarity with analyzing and interpreting quantitative data.

Assignments are due on the dates indicated in the “Course schedule” on Blackboard. Please upload your assignment in a Word document where indicated on Blackboard, and retain a copy of your assignment in case the upload fails. Please do not miss class to work on an assignment due that day -- you will fall behind on important material for the next assignment, and jeopardize the attendance component of your grade. You may submit the assignment on Blackboard following class (until 11:59pm before it is indicated as late).

Unless otherwise stated, all assignments are to be completed individually, such that each student must submit his/her own original work. Independent work allows the instructor to assess each student’s level of understanding of course material.

Final Project: The final project will evaluate students' comprehension of the research concepts, methods, and statistics discussed in class through the development of a proposal for a quantitative study. Students will also present to the class a summary of their project. Further details will be provided on the requirements and deadlines for the final project.

Assistance with writing & citations: Students are expected to submit work that is proof-read and formatted in APA-style. If you need assistance with APA style or general scientific writing skills, please refer to resources provided by the University Writing Center (http://academics.utep.edu/writingcenter). Useful APA-style tutorials are provided on their website under the heading “Helpful Information -- Citation Styles”.

Required reading: Students are expected to have accomplished reading assignments and/or Blackboard exercises prior to each class meeting, as indicated in the “Course schedule.” Assigned reading will come primarily from the required text, although other reading materials may be posted on Blackboard.

Tips on reading Statistics for the Behavioral Sciences chapters:
1. First, read the "Summary" at the end of the chapter
2. Then, flip through the chapter and read the title of each section (i.e., "1.2 Populations and Samples")
3. As you go through the chapter, pay special attention to terms in bold or in boxes, and to graphs or other figures. Don’t get stuck on formulas or on text that may be difficult to understand before we discuss it in class. However, you will have a better understanding of the concepts covered during class if you have followed this procedure for previewing the chapter.
# Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Material</th>
<th>DUE</th>
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<tbody>
<tr>
<td>1/23</td>
<td>Review of Quant I with Quiz</td>
<td>Ch. 1-14, 16: Chapter Summaries</td>
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<tr>
<td>1/30</td>
<td>Factorial ANOVA</td>
<td>Ch.15</td>
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<tr>
<td>2/6</td>
<td>Factorial ANOVA II</td>
<td>Ch.15, <a href="#">Spencer et al., 1999</a> <a href="#">Tiedemann, 2002</a></td>
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<tr>
<td>2/13</td>
<td>Chi-square</td>
<td>Ch. 18, <a href="#">Hofstein et al., 2005</a></td>
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<td>AS2</td>
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<td>2/27</td>
<td>Multiple regression I</td>
<td>Ch. 17, <a href="#">Hassan, 2008</a></td>
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<tr>
<td>3/6</td>
<td>Multiple regression II</td>
<td>Ch. 15 &amp; 17, <a href="#">DaRos-Voseles, 2008</a></td>
<td>AS3</td>
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<tr>
<td>3/13</td>
<td>SPRING BREAK</td>
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<td>3/20</td>
<td>ANOVA/ANCOVA &amp; Regression</td>
<td>Ch. 15 &amp; 17, <a href="#">Williams &amp; Hellman, 2004</a> <a href="#">Porter &amp; Raudenbush, 1987</a> <a href="#">Xu, 2008</a> <a href="#">Tabachnick &amp; Fidell</a></td>
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<td>Logistic regression</td>
<td>Ch. 17, <a href="#">Bleeker &amp; Jacobs, 2004</a> <a href="#">Peng et al., 2002</a></td>
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<td>Overview of advanced techniques</td>
<td>Ch. 19-20, <a href="#">Carreker et al., 2005</a> <a href="#">McKenzie &amp; Gow, 2004</a> <a href="#">Fabrigar et al., 1999</a></td>
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<td>Article Presentations</td>
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<td>AS6</td>
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<td>5/1</td>
<td>NO CLASS – Prep Presentation</td>
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<td>5/8</td>
<td>Final presentations</td>
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<tr>
<td>5/16</td>
<td>FINAL DUE</td>
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Articles for Presentations in **BOLD**