

**EDUCATIONAL RESEARCH & STATISTICS (EDRS 5305)  
FALL 2017**

**The University of Texas at El Paso**

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**Class meetings:** On Tuesdays identified in the Course Schedule (see Blackboard)  
6pm - 8:50pm; Education Building, Room 110

**Office hours:** Tuesdays & Thursdays 11:30am-1:30pm  
To schedule a meeting outside of these hours, please **email** me to arrange a meeting time.

**Textbook:** Gravetter, F. J. & Forzano, L. B. *Research Methods for the Behavioral Sciences*. (5th OR earlier edition is acceptable.)

**Hybrid course utilizing Blackboard:** This online resource 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. For technical assistance with accessing Blackboard, please contact the UTEP Helpdesk (747-5257, [helpdesk@utep.edu](mailto:helpdesk@utep.edu)).

**Course description:** This course provides an overview of quantitative research methods for the behavioral sciences and education in particular. Emphasis is placed on developing the ability to critically evaluate methodological aspects of research studies, in order to be a responsible investigator and/or consumer of research.

**Learning objectives:** This course aims to guide students toward attaining the following learning objectives: 1) comprehend key characteristics of scientific research, including education research; 2) differentiate among various approaches to scientific research and research methodologies; 3) evaluate the validity of a particular research study with a primary focus on quantitative studies; and, 4) conduct a research literature review.

**Student learning outcomes:** At the conclusion of the course, students will achieve the following outcomes: 1) understand and explain the characteristics of scientific research, and quantitative research in particular; 2) formulate a research question appropriate for scientific investigation; 3) distinguish among different forms of research literature, and locate pertinent scholarship; 4) describe and critique aspects of a quantitative research study; and, 5) draw conclusions and implications from a body of research literature.

**Course policies.** Please observe the university's academic regulations outlined in the UTEP Graduate Catalog (<http://catalog.utep.edu/grad/>), 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. Absences will be evaluated 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.

**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) when requested, completion of 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. Submitting work that is not your own from other sources constitutes plagiarism. Please refer to resources provided by UTEP, including: <http://sa.utep.edu/osccr/academic-integrity/>, <http://sa.utep.edu/osccr/wp-content/uploads/sites/8/2012/09/Avoiding-Plagiarism.pdf>, and, <http://sa.utep.edu/osccr/wp-content/uploads/sites/8/2013/05/Faculty-Resource-Detecting-and-Deterring-Plagiarism.pdf>.

**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 rubrics for assignments and the final project are provided on Blackboard.

**Late work:** No higher than a B can be earned on an assignment that is **2 days** 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/grad/>).

Final grades of A, B, C, and lower will be assigned according to the number of points earned in the course, with respect to the following scale:

Grading scale

A = 100-90 points

B = 89-80 points

C = 79-70 points, etc.

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

**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.**” Students are responsible for all assigned reading material, including chapters from the required textbook, as well as modules, articles, and other content identified on Blackboard.

**Tips on reading textbook chapters:**

1. **First**, look at the outline of the chapter in the Table of Contents to find the topics in the chapter that match those listed on the instructor’s Course Schedule (on Blackboard). You may need to read only **certain sections** of the chapter depending on the topics that will be covered in class.
2. Next, read the “**Summary**” at the end of the chapter.
3. Then, flip through the chapter and read the title of each section (i.e., “The Research Hypothesis”).
4. As you go through the chapter, pay special attention to terms in bold or in boxes, and to graphs or other figures. You will have a better understanding of the concepts covered during class if you have followed this procedure for previewing the chapter.

**Assistance with writing & citations:** Students are expected to submit work that is proofread and formatted in **APA-style**, where applicable. 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>), and to those listed on the “**Useful websites**” module in Blackboard.

**Assignments:** Course assignment **instructions** are posted on Blackboard. Assignment instructions each contain a stated **learning objective**. Generally, assignments will ask students to evaluate research according to the topics covered in the course. The **goals** of the assignments include: to comprehend the key components of quantitative educational research; to effectively read and understand educational research literature; to critically evaluate educational research design; and, to gain familiarity with interpreting quantitative data reports. The assignments build upon each other toward completion of the final assignment.

Unless otherwise specified, assignments are designated as **individual work**, which means that each student must submit his/her own original work as reflections of his/her own conceptualizations, phrasing, and language. Independent work allows the instructor to assess *each* student's level of understanding of course material.

Assignments are **due on Blackboard** by the dates indicated in the “Course schedule”. Please do not miss class to work on the assignment due that day—you will fall behind on important material for the next assignment, and jeopardize the attendance component of your grade.

**Evaluation:**

*Assignments (4) x 15 points each = 60 points*

*Class presentations (2) x 10 points each = 20 points*

*Final Paper = 20 points*

*Total points = 100*

**Course schedule:** Note that some weeks we will not be meeting in class, but assignments and/or material may be posted on Blackboard. **Check Blackboard regularly for any updates or modifications to the course schedule.**

### COURSE SCHEDULE

Date	Topic	Assignment Due	Text*/Material
8/29	MEET Importance & characteristics of scientific research Research methods: Quantitative & Qualitative Peer-reviewed research Research questions		Ch. 1 & 2 BB: <ul style="list-style-type: none"> <li>• <i>Intro to Research Methods</i></li> <li>• <i>Research Literature</i></li> </ul>
9/5	ONLINE	<b>Assignment #1</b>	
9/12	MEET Conducting literature searches Contents of research articles Evaluating quantitative research studies		Ch. 16 BB: <ul style="list-style-type: none"> <li>• <i>Contents of a Research Article</i></li> </ul>
9/19	ONLINE	<b>Assignment #2</b>	
9/26	MEET Randomized controlled experiments Variables Participants & Ethics in Research		Ch. 3-4, 6-9, 13 BB: <ul style="list-style-type: none"> <li>• <i>Experiments in Quant Research</i></li> <li>• <i>Ethics in Research</i></li> </ul>
10/3	ONLINE	<b>Assignment #3</b>	
10/10	MEET Non-experimental research Descriptive statistics Surveys Reliability & validity in measurement		Ch. 5, 10-11 BB: <ul style="list-style-type: none"> <li>• <i>Non-Experimental Quant Research</i></li> <li>• <i>Quant Research: Samples and Validity</i></li> <li>• <i>Measurement in Behavioral Science</i></li> </ul>
10/17	ONLINE		
10/24	MEET Intro to inferential statistics Research validity Discussing and writing about research Critique and synthesize scientific research		Ch. 12, 14-15
10/31	ONLINE	<b>Assignment #4</b>	
11/7	MEET	<b>Presentations</b>	
11/14	ONLINE		
11/21	ONLINE (Thanksgiving week)		
11/28	MEET	<b>Presentations</b>	
12/5	ONLINE		
12/12	ONLINE – FINAL ASSIGNMENT DUE	<b>Final Paper</b>	

\*Numbered for 4<sup>th</sup> edition of textbook, although any edition is acceptable.