



THE UNIVERSITY OF TEXAS AT EL PASO

College of Education  
Educational Psychology and Special Services

**EDPC 5310 (Section 3): Applied Research Design for Educators  
(Special Ed. & Ed. Diag. Majors)**

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 Office Hours: Monday 1:30 – 3:30 on campus; Wednesday online 1:00 – 2:45; or by appt.  
 Required Text: Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2014). *How to Design and Evaluate Research in Education* (9<sup>th</sup> ed.). New York: McGraw-Hill. **Note: International version is the same text and is cheaper**  
 Recommended Text: American Psychological Association (2010). *Publication Manual of the American Psychological Association* (6<sup>th</sup> ed.). Washington, D.C.: American Psychological Association.  
 Required Supplemental Readings: Research articles to be assigned (TBA)

**Course Overview**

This course introduces students to research methods used in educational and community settings that serve diverse populations. Emphasis will be placed on understanding the nature of research, the research process, and various quantitative and qualitative research methodologies so that students can read, use and design research to address educational and community problems and program needs.

**Course Objectives**

1. Understand the importance of research in advancing the special education profession, including its use to inform evidence-based practice
2. Identify and describe special education-related educational problems
3. Formulate educational research questions
4. Understand the steps of planning and conducting an educational research study
5. Conduct a brief literature review in order to identify and review credible sources informing an educational problem
6. Understand and identify the types and roles of variables, hypotheses, and sampling procedures in educational research
7. Understand qualitative, quantitative and mixed research methods and when they are used

8. Understand basic statistical methods used in educational research
9. Interpret basic statistical data and results in educational research
10. Understand ethical issues and practices in conducting, interpreting, and reporting results of educational research
11. Explain the importance of validity, reliability, and scales of measurement in reading and conducting educational research

Because this is a graduate course of study leading to an advanced academic degree, I have high expectations for you. Likewise, you should have high expectations for me. Our behavior in the class reflects our professional attitudes about education as a profession. This class will be taught in a hybrid format, so these expectations include behavior both in class and online.

I expect the following of students:

- Time management: This is a time-intensive and content-intensive class. The rule of thumb for studying in graduate courses is approximately three (3) hours for every credit hour taken. This is a standard figure recommended for graduate school by American universities. This means that for every hour we meet on campus, you should expect to devote up to 3 hours out of class to written assignments and preparing for class. For online weeks, you should expect to devote up to 12 hours on written assignments and preparing for the next week's class. You may not always need to devote this amount of time but you should be prepared to do so if necessary to be successful in this class.
- Regular attendance at on-campus classes. Much of our learning will be done in the interactive, collaborative setting of the class. If someone is not here, it affects the learning of everyone in the class. If you must miss class due to professional reasons, please provide documentation ahead of time. If you know ahead of time that you must miss more than one class due to professional or personal reasons, you should plan to take the class in a subsequent semester. If you must miss class due to unexpected emergencies, please notify the instructor with documentation as soon as possible.
- Careful preparation for class. Because our time together is limited, it is essential that you come to class prepared. This means that you should read and reflect on assigned materials before class in order to be thoroughly prepared to discuss them. Details on requirements are provided in the course timeline and course modules.
- Bring textbook and research articles to every class. In-class activities require having these available in order to actively participate; therefore they are a part of attendance and participation. *If you are unable to print or download assigned articles to a hand-held device, please notify the instructor in advance and I will make a copy available.*
- Active participation in face-to-face and online activities based on thorough preparation, thoughtful contributions, and respectful support of your colleagues' learning.

- Make regular use of the Blackboard site for this class as it will be our primary means of communication outside of class, and for learning when we are online. You should plan to check Blackboard several times weekly for announcements and Blackboard emails.
- On-time completion and submission of all assigned activities and assignments.
- Assignments will be submitted electronically through Blackboard before the due dates. Late assignments will be penalized one letter grade for each day they are late, unless prior arrangements have been made with the instructor. In order to make sure that you receive credit, it is strongly recommended that you do not wait until the last minute to submit assignments through Blackboard in case it goes down or you lose power unexpectedly. In the unlikely event that Blackboard is down when you are submitting an assignment, you should send it to me via UTEP email. However, you are still required to submit it through Blackboard when it becomes available.

Students should expect the following of me:

- Careful and thorough planning and preparation in support of your learning for classes and online activities.
- Feedback on assignments will usually be returned to you within one week of due date, barring unforeseen circumstances.
- Timely out-of-class communication, which will usually consist of Blackboard email correspondence since it is the most efficient and convenient method of communication. I will make every effort to respond to messages 2-4 times daily Monday through Friday and within 24 hours on weekends. I will also be available for office hours and for personal and phone conferences by appointment. Use UTEP email only if Blackboard is down.
- Modeling effective teaching practices and professionalism.

**Course Requirements**

**Attendance and Participation**

I expect each of you to make every effort to attend all class meetings and participate actively in learning activities. Attendance and participation include the following: arriving to class on time, staying for the entire class, reading assigned chapters in the textbook and research articles before coming to class, bringing textbook and research articles to class, and actively participating in learning activities. Lack of any of these elements of attendance and participation without making prior arrangements will constitute an unexcused absence. I acknowledge that your obligation to this class will be superimposed on family and professional responsibilities. However, absence, lack of punctuality, or lack of preparation, does not excuse any of us from our obligations to our own learning and to the learning of others. Completion of this course constitutes partial fulfillment of the requirements for an advanced academic degree and professional certification. I expect that absence, late arrival, or early departure will be handled professionally. As a

professional courtesy, the instructor should be contacted before class whenever possible.

Attendance, on-time submission of assignments, practice quizzes, active participation, and completion of in-class activities will be credited 5 points per class or online week.

### **Introductory and Conclusion Assignments**

See the Weeks 1 and 15 BB course modules for completing introductory and concluding assignments. These include a syllabus assignment, online discussion posts, and two questionnaires, pre and post.

### **Practice Quizzes**

For most chapters in the textbook, there will be one to three practice quizzes on Blackboard. A recent meta-analysis of research studies has confirmed that practice tests are the most beneficial study strategy for test preparation (Adesope, Trevisan, & Sundararajan, 2017). When we meet on campus, you will be required to complete one practice quiz per chapter before discussing the chapter in class and this will count as part of your attendance/participation grade. For each week when we are online, you will be required to complete a minimum of two practice quizzes per chapter, unless there is only one quiz posted. The remaining practice quizzes are optional but highly recommended even if taken after the due date. Completion of optional practice quizzes before discussing the chapters in class will also be taken into consideration in the event of a borderline grade. You will see your scores on these quizzes in your Blackboard grade center but they are not a separate part of your calculated grade. If you have questions as you complete the quizzes, please bring them to class so we can discuss and clarify concepts.

### **Research Project (Parts 1, 2, and 3)**

Because this course fulfills requirements leading to a professional degree in education, the written assignments are designed to give you authentic experiences in planning major phases of reading and designing educational research. They are sequenced to walk you through important steps of the research process to design a research study on an educational problem of interest to you. Each assignment is worth 40 points and will be graded using rubrics that spell out point values for each component of the assignment. In order to be as authentic as possible, you will have the option to complete these individually or in groups of up to four members, since research is nearly always, but not necessarily, a collaborative enterprise. Parts 1 and 2 can be revised based on my feedback to earn back points.

### **Exams**

In addition to written assignments, there will be two open book online exams worth 40 points each. These exams are designed to assess your ability to understand and apply important research concepts in your profession. In addition to the exams, you will complete selected modules from the CITI IRB training for ethics in research and protection of human subjects. There is one brief quiz for each IRB module, for a total of 25 points. Performance on the IRB quizzes will be documented by submitting a screen capture of the modules completed, including the quiz scores

and your name. These IRB quizzes may be retaken to improve your score, but the documentation for completion must be submitted by the due date. It is recommended, therefore, that you complete this training early so that you may retake the quizzes if you choose.

### **Research Article Discussions**

An important goal of this class is developing skills in reading research articles. In order to facilitate this goal, we will have in-class discussions about research articles. You will be assigned to groups of approximately 3-4 students to conduct these discussions in class. In order to ensure that everyone is prepared for the discussion, you will post online responses to specific questions concerning each assigned research article. These will be due before the in-class discussions take place. Specific instructions and due dates for the discussions will be provided.

### **Learning Modules**

For most of the chapters in the textbook, I have prepared learning modules to facilitate your learning. These modules include a summary of the most important topics in each chapter, offer examples of research concepts, and include videos to illustrate many of the important concepts. Although the modules do not include required assignments or quizzes, it is strongly recommended that you take advantage of these learning materials to help supplement your learning in the course. Please note that they do not replace reading the chapters which contain more detailed information.

**Following is a listing of the course requirements and point values:**

<b>Assignment</b>	<b>Points Possible</b>
Introductory/conclusion assignments	25
Research Project Part 1	40
Research Project Part 2	40
Research Project Part 3	40
IRB training (documented with screen capture of module completion)	25
Exams (2 @ 40 points each)	80
Online responses to research article questions (3 wks @ 5 points each)	15
<u>Participation/attendance/practice quizzes (15 wks @ 5 points each)</u>	<u>75</u>
Total Points	340

### **Grading**

Grading rubrics will be provided for each required written assignment. Letter grades will be assigned using the following scale:

- A = 90% to 100%
- B = 80% to 89%
- C = 70% to 79%
- D = 60% to 69%
- F = 59% and below

**IMPORTANT NOTE ABOUT GRADES:** You will be able to see your grades in Blackboard. However, it is the responsibility of each student to monitor your own grades and bring any concerns to the attention of the instructor. Unfortunately there are occasional glitches in the grade center in Blackboard, but I can only correct them if I am made aware of them. It is also the responsibility of the student to contact the instructor if there are concerns about performance in the class. This must be done early enough in the semester so that a plan for improvement can be put into place. If you wait until the end of the semester, it is too late. Although there may be occasional opportunities during the semester for all students to earn extra credit points, no such opportunity will be offered to individual students at any time.

### **Students with Disabilities**

The university is committed to the principle that in no aspect of its programs shall there be differences in the treatment of persons because of race, creed, national origin, age, sex, or disability, and that equal opportunity and access to facilities shall be available to all. If you require special accommodations, please provide documentation to the Center for Accommodations and Support Services (CASS).

### **Policy on cell phones, tablets, etc.**

Please respect the instructor and your peers by turning off your cell phones and beepers upon entering our classroom, unless you have notified me at the beginning of class that you have a critical family situation about which you must be notified. This should constitute only emergencies. Also, refrain from bringing anything to class that rings, buzzes, beeps, or otherwise makes a distracting noise. Text messaging or use of any other technology for anything other than note-taking or classroom learning activities (e.g. research article discussions) are also not permitted.

### **UTEP Policy on Academic Integrity**

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another person's as ones' own. And, collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

#### **A. "Cheating" includes:**

1. Copying from the test paper of another student, engaging in written, oral, or any other means of communication with another student during a test, or giving aid to or seeking aid from another student during a test;

2. Possession and/or use during a test of materials which aren't authorized by the person giving the test, such as class notes, books, or specifically designed "crib notes";
3. Using, obtaining, or attempting to obtain by any means the whole or any part of non-administered test, test key, homework solution, or computer program; using a test that has been administered in prior classes or semesters but which will be used again either in whole or in part without permission of the instructor; or accessing a test bank without instructor permission;
4. Collaborating with or seeking aid from another student for an assignment without authority;
5. Substituting for another person, or permitting another person to substitute for one's self, to take a test; and
6. Falsifying research data, reports, and or other records or academic work offered for credit;

B. "Plagiarism" means the appropriation, buying, receiving as a gift or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own academic work offered for credit, or using work in a paper or assignment for which the student had received credit in another course without direct permission of all involved instructors;

C. "Collusion" means the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on scholastic dishonesty.

Academic dishonesty is an assault upon the basic integrity and meaning of a University. Cheating, plagiarism, and collusion in dishonest activities are serious acts which erode the University's educational and research roles and cheapen the learning experience not only for the perpetrators, but also for the entire community. It is expected that UTEP students will understand and subscribe to the ideal of academic integrity and that they will be willing to bear individual responsibility for their work. Materials (written or otherwise) submitted to fulfill academic requirements must represent a student's own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions.

**Tentative Course Schedule**

<b>Date</b>	<b>Topic</b>	<b>Reading assignments, tasks, and practice quizzes due (check BB for specifics on assignments and due dates/ times)</b>	<b>Graded Written Papers/ Exams</b>
Week 1: 8/27  Meet on campus 8/27	Introduction to the Course Syllabus  What is Educational Research?  <ul style="list-style-type: none"> <li>• What are the purposes of educational research?</li> <li>• What is the scientific method in education and psychology?</li> <li>• What is the nature of educational and psychological research in schools, classrooms, and communities?</li> </ul>	Complete all introductory tasks in BB Week 1 course folder by the indicated due dates	
Week 2: 8/28 – 9/3  Online (Labor Day)	Basics of Research, Part 1: Planning research and selecting a research problem  Basics of Research, Part 2: Searching for research literature	Read FWH Ch. 1-2 (see BB for specific pages)  Skim FWH Ch. 3  Complete required practice quizzes by Monday 9/3 at 11:59 PM	
Week 3: 9/4 – 9/10  Meet on campus 9/10	Basics of Research, Part 3: Variables, Hypotheses, and Sampling  <ul style="list-style-type: none"> <li>• Independent and dependent variables</li> <li>• Operational definitions of variables</li> <li>• Forms of hypotheses</li> <li>• Populations and samples</li> </ul>	Read FWH Ch. 5-6  Read handout on plagiarism  Complete learning modules  Complete required practice quizzes by Monday 9/10 at 5:00 PM	Begin working on Research Project Part 1
Week 4: 9/11 – 9/17  Meet on campus 9/17	Basics of Research, Parts 1-3: Review and application  Research article discussion	Review FWH Ch. 1-2, 5-6  Read research article in preparation for in-class article discussion  Post answers to research article questions by Monday, 9/17 at 5:00 PM	Continue working on Research Project Part 1
Week 5: 9/18 – 9/24	Basics of Research, Part 4: Measuring Variables in Educational Research  <ul style="list-style-type: none"> <li>• Validity and reliability of measures</li> </ul>	Read FWH Ch. 8-9  Complete learning modules	Research Project Part 1 due Mon-

Meet on campus 9/24	<ul style="list-style-type: none"> <li>• Scales of measurement</li> <li>• Internal validity</li> </ul>	Complete required practice quizzes on BB by Monday 9/24	day 9/24 at 11:59 PM
Week 6: 9/25 – 10/1  Meet on campus 10/1	The basics of research, Part 5: Statistical concepts for quantitative research <ul style="list-style-type: none"> <li>• Descriptive statistics: Measures of central tendency and measures of variability</li> <li>• Inferential statistics and hypothesis testing: <i>t-tests</i>, <i>ANOVA</i>, <i>chi-square</i> tests</li> </ul>	Read FWH Ch. 10-11  Complete learning modules  Complete required practice quizzes on BB by Monday 10/1 at 5:00 PM	Begin working on Research Project Part 2
Week 7: 10/2 – 10/8  Online (Columbus Day)	The basics of research, Part 5: Review and application <ul style="list-style-type: none"> <li>• How to read and interpret the results section of a research report</li> </ul>	Read FWH Ch. 12  Complete learning modules  Complete required practice quizzes	Work on Research Project Part 2
Week 8: 10/9– 10/15  Meet on campus 10/15 (5 – 7:00)	Review: Interpreting statistical results of a research report	Review FWH Ch. 10-12  Statistics Worksheet	Review for mid-term exam  Work on Research Project Part 2
Week 9: 10/16 – 10/22  Meet on campus 10/22 (5 – 7:00)	Research methods 1: Quantitative research—experimental, single subject	Read FWH Ch.13 - 14  Review FWH Ch. 9  Complete learning modules  Complete required practice quizzes on BB by Monday 10/22 at 5:00 PM	Mid-term exam due Friday 10/19 at 11:59 PM
Week 10: 10/23 – 10/29  Meet on campus 10/29 (5 – 7:00)	Review experimental and single subject research in special education  Research article discussion single subject	Review Ch. 13 - 14  Read research article in preparation for in-class article discussion  Post answers to article by 10/29 at 5:00 PM	

<p>Week 11: 10/30 – 11/5</p> <p>Meet on campus 11/5 (5 – 7)</p>	<p>Research methods 2: Correlational and causal comparative</p> <p>Introduction to Research methods 3: Qualitative research – observation and interviewing</p>	<p>Read FWH Ch. 15 – 16</p> <p>Complete learning modules</p> <p>Complete required practice quizzes by Monday 11/5 at 5:00 PM</p>	<p>Work on Research Project Part 2</p>
<p>Week 12: 11/6 – 11/12</p> <p>Meet on campus 11/12 (5 – 7)</p>	<p>Qualitative research</p>	<p>Read FWH Ch. 18-19</p> <p>Complete learning modules</p> <p>Complete required practice quizzes on BB by Monday, 11/12 at 5:00 PM</p>	<p>Research Project Part 2 due Monday 11/12 at 11:59 PM</p>
<p>Week 13: 11/13 – 11/19</p> <p>Online (Thanksgiving week)</p>	<p>Research methods 4: Mixed methods and action research</p>	<p>Read FWH Ch. 23-24</p> <p>Complete learning modules</p> <p>Complete required practice quizzes on BB by Monday 11/19 at 11:59 PM</p> <p>Read research article in preparation for in-class article discussion on 11/26</p> <p>Post answers to article questions by Monday, 11/19 at 11:59 PM</p>	<p>Begin working on Research Project Part 3</p>
<p>Week 14: 11/20 – 11/26</p> <p>Meet on campus 11/26 (5 – 7)</p>	<p>Review Research methods 4: Mixed methods and action research</p> <p>Qualitative research article discussion</p> <p>Ethics in Research: Protection of Human Subjects</p>	<p>Read FWH Ch. 4</p> <p>Read APA manual pp. 11-20</p> <p>Complete IRB CITI training modules by Monday, 11/26 at 5:00 PM</p>	<p>Complete required IRB CITI training modules; Work on Research Project Part 3</p>
<p>Week 15: 11/27– 12/3 (5 – 7)</p>	<p>Review of Educational Research</p>	<p>Review Ch. 9, 13 – 19; 23-24</p>	<p>Work on Research Project Part 3</p>

Meet on campus 12/3 (5 – 7)			
Finals Week		Research Project Part 3 due by Friday 12/7 at 11:59 PM  Final Exam due by Sunday 12/9 at 11:59 PM  Research Questionnaires due by Sunday 12/9 at 11:59 PM	