

**EDUC 5367: Research Methods in MBE**  
University of Texas at Arlington  
Fall 2015

**Professor:** Dr. Evie Malaia  
**Office Number:** Hammond Hall, #416  
**Office Telephone Number:** 817-252-0526  
**Email Address:** [malaia@uta.edu](mailto:malaia@uta.edu)

**Office Hours:** by appointment.

**Time and Place of Class Meetings:** Tuesday 5:10 – 7:40, Science Hall 333.

**Description of Course Content:** This course presents an overview of the process of scientific inquiry in general, while fostering an understanding of research paradigms used by educational practitioners.

**Student Learning Outcomes:**

At the end of the course all students should be able to articulate their own research interests in ways that simultaneously draw on major theoretical, thematic, and epistemological traditions within the subfield while also engaging scholars who work in different areas. They should have the fundamental and practical understanding of research methods in order to critically examine, synthesize and clearly communicate and understand scientific ideas/findings in MBE through written discourse.

**Required Textbooks and Other Course Materials:**

Paul Leedy and Jeanne Ormrod. Practical Research: planning and design. ( 9<sup>th</sup> or 10<sup>th</sup> edition)  
Except for this text, other readings are posted on Black Board.

**Descriptions of major assignments and examinations:**

**Human subjects researcher certification:** One of class requirement is for the students to pass UTA Human Subject Protection (HSP) training. This is a necessary requirement for conducting the capstone project. UTA Internal Review Board (IRB) requires all students conducting research to be certified. If IRB holds an on-site training during the semester, this training can be used as alternative (email from IRB officer confirming participation is required).

**Brief article review:** Each student will write a brief summary on the week's article, specifying research question, operational definitions of variables, measurement instruments(s), statistical approach, and main conclusions (full rubric is posted on BlackBoard). **Reviews are due before class on the day for which the readings were assigned.**

**Research Proposals:** Each student will submit a final research proposal. The work on this exercise will proceed in three major steps: first, you will write a 4-5 page paper which will introduce your research question and literature review. Second, you will write a conceptualization and operationalization paper, in which you will identify the main variables in your study and explain how you are going to operationalize and measure these variables. This paper is likely to be another 4-5 pages. Third, you will write a final paper, in which you will propose a research design to investigate your research question. In this final paper you will combine two earlier papers together and will write a section detailing methods of your data collection and analysis. Your final paper takes a format of a grant proposal, in which you present your research question, justify the importance of this question, discuss how it was studied before and how your approach is adding to the scholarship, and present the design of your study. Final paper will be 12-15 pages long. **Individual parts of the research proposal and the final paper are due in class on the days listed in the syllabus.**

**Attendance and participation:** This class will be taught as a seminar, using a discussion format. Students should come to class having already done the reading for that session. This will allow you to discuss the readings for that day as part of our class. Productive discussion seminars are a collective good: they rely on the hard work and commitment of everyone enrolled to work well. Please, read critically; learning how to read, evaluate, and relate the readings to

each other is one important goal of the course. Each student must do the assigned readings and actively participate in seminar discussions, present on one of the readings, write a brief essay on specific questions of the week readings, and write a research proposal to succeed in this class.

### **Participation:**

- (1) In addition to active participation, every student will sign up for one in-class presentation of a paper of your choice listed in the syllabus. Your goal is to place the research in the context of MBE subfield and relate it to your research project. The presentation should have a visual format to facilitate discussion and your reasoning (Power Point or hard copy outlines for all students).

### **Grading:**

Weekly article reviews (10)	10% (50 points)
Participation	10% (50 points)
Article presentation	10% (50 points)
Research question and literature review paper	10% (50 points) <b>(due February 3<sup>rd</sup>)</b>
Methods paper	10% (50 points) <b>(due February 24<sup>th</sup>)</b>
UTA human subject research certification	20% (100 points) <b>(due April 7<sup>th</sup>)</b>
IRB submission (on time)	10% (50 points) <b>(April 21<sup>st</sup>)</b>
Final Research Proposal	20% (100 points) <b>(due April 28<sup>th</sup>)</b>

### **Final Grade Composition:**

94 – 100% or 470 – 500 points = A	
90 – 93.9% or 450 – 469 points = A-	73–76.9% or 365–384 points = C
87 – 89.9% or 435 – 449 points = B+	70–72.9% or 350–364 points = C-
83 – 86.9% or 415 – 434 points = B	67–69.9% or 335–349 points = D+
80 – 82.9% or 400 – 414 points = B-	63–66.9% or 315–334 points = D
77 – 79.9% or 385 – 399 points = C+	Below 63 % or 315 points = F

Students are expected to keep track of their performance throughout the semester and seek guidance if their performance drops below satisfactory levels.

**Expectations for Out-of-Class Study:** Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, etc.

**Disclaimer:** This syllabus is not a contract and may be changed for reasonable purposes during the semester in any way that serves the educational needs of the students enrolled in this course at the instructor's discretion. If the syllabus is changed, you will be notified via email and/or during the class.

### **Course Schedule and Readings**

#### **Week 1, January 20**

##### **How To Conduct Research in Education: identifying research question**

- Leedy and Ormrod (textbook), chapter 1.
- NB: Select 3 articles from the suggested list. Email EM your top three selections by Jan. 22<sup>nd</sup>.

#### **Week 2, January 27**

##### **How to formulate a research problem?**

- Article review 1 due
- Leedy and Ormrod (textbook), chapters 2 & 3.
- Presentation: parental influence on education

**Week 3, February 3rd**

- Article review 2 due

**Research question + annotated bibliography DUE**  
(see rubric for detailed requirements)

**Week 5, February 10th****Selecting methodology to address the research problem; qualitative research**

- Article review 3 due
- Leedy and Ormrod (textbook), chapters 4 & 5, 6 (if using 9<sup>th</sup> edition, Chapter 7).
- Presentation: affective influences on cognition

**Week 6, February 17th****Quantitative research methods & experimental design**

- Article review 4 due
- Leedy and Ormrod (textbook), chapters 8, 9 (if using 9<sup>th</sup> edition, it's Chapters 8 & 10).
- Presentation: relationship between attention and learning

**Week 7, February 24<sup>th</sup>**

- Article review 5 due

**Literature Review DUE**  
(see rubric for detailed requirements)

**Week 8, March 3rd****Data-driven analysis: understanding the data**

- Article review 6 due
- Leedy and Ormrod (textbook), chapter 11 (same chapter number in both editions; 10<sup>th</sup> is expanded).
- Presentations: dyslexia, ADHD, sensory processing research

**Week 9, March 10th**

No class: Spring Break

**Week 10, March 17th****Presenting and interpreting analyzed data**

- Article review 7 due
- Leedy and Ormrod (textbook), chapter 12.
- Presentation: motivational component in cognitive processing

**Week 11, March 24th**

**Research design and methods paper DUE**  
(see rubric for detailed requirements)

**Week 12, March 31st****Journal publishing and peer review**

- Article review 8 due

Student presentations: select a journal in the field of educational research. (Alternative: find a call for a Special Issue, a volume for school teachers and practitioners, national-level conference call, etc.)

Obtain guidelines for authors and for reviewers, find information on the review process and timeline, impact factor, and target audience. Assess the topics of recent publications, most frequently read (downloaded) and most frequently cited articles in the journal. Select target outlet for your research project and explain your selection.

- Presentation: investigating multiple covariates

**Week 13, April 7th**

**Practical research: anticipating and addressing problems**

- Article review 9 due
- Presentation: dealing with outliers in human research data

**UTA Human Subject Research certifications DUE**  
**(submit PDF of test results on Blackboard)**

**Week 14, April 14th**

- Project updates and peer review
- Article review 10 due
- Presentation

**Week 15, April 21st**

**DUE: IRB applications submitted IN FULL through UTA system**

(main form; form 2D/research with children; recruitment materials; stimulus materials; support letters)

**Week 16, April 28th**

**Final papers DUE**  
**(See rubric for detailed requirements)**

**Week 17, May 5<sup>th</sup>**

**Revisions DUE (if required)**

## Course Policies

*Late papers:* Papers handed in late will result in an automatic 1.0 deduction in grade for that paper, and no paper will be accepted that are more than one week late. *Extensions must be requested prior to the paper due date and have a valid reason.* No extension will be granted the day paper is due except for documented medical or personal emergencies.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://web.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible

for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.