

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICAL SCIENCES

Course Number: MATM 5360-17189

Course Title: Introduction to Research in Mathematics Education

Credit Hrs: 3

Term: Fall 2019

Course Meetings & Location: Tuesdays & Thursdays 6:30PM – 7:50PM

Location: LART 208

Prerequisite Courses: Departmental Approval

Course Fee: (if applicable) None

Instructor: Kien Lim

Office Location: Bell Hall 301

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Office Hours: Tuesdays: 3:00 PM – 4:15 PM

Thursdays: 8:00 PM – 8:30PM

Course Description An introduction to research in math education on how to navigate, evaluate, and synthesize the research literature, formulate a compelling and feasible research question, and conduct a thorough literature review that can serve as the basis for a future educational research study.

Textbook(s), Materials: Required:

Improving Schools through Action Research (4th ed.)
by Cher Hendricks. Boston: Pearson.

References:

- i. National Council of Teachers of Mathematics. (2014).
Principles to actions: Ensuring mathematical success for all.
Reston, VA: National Council of Teachers of Mathematics
- ii. *Writing the Winning Thesis or Dissertation: A Step-by-Step Guide* (2nd ed.) by Allan Glatthorn and Randy Joyner.
- iii. *Handbook of Research on Mathematics Teaching and Learning*
by Grouws D. A. (Ed.).
- iv. *Second Handbook of Research on Mathematics Teaching and Learning*
by Lester F. K. (Ed.).

Course Objectives:

Students will

- design a research study related to teaching/learning of mathematics
- appreciate the importance of teaching students to think mathematically and understand conceptually
- demonstrate the ability to develop well-formulated research questions and viable research methods
- identify and select appropriate resources to inform their research study
- recognize the different types of articles in mathematics education and critically evaluate them
- organize credible information to support the purpose of their research study
- demonstrate an awareness of legal and social issues involved with the use of information such as copyright infringement, plagiarism, and censorship
- communicate clearly and effectively

Activities/Assignments:

Students will participate in in-class activities, read assigned articles and book chapters, turn-in weekly homework assignments, prepare for weekly quizzes and mid-term exams, and submit a research paper based on a pilot study. Online polling via iClicker will be used to enhance student participation. Students are expected to bring a smartphone or tablet to class so that they can participate online polling.

Assessment:

- Assignments are due via *Blackboard* on Sundays at 11pm. They will be graded based on effort and understanding. Late work will not be accepted.
- Your comprehension of the assigned readings and underlying math concepts will be assessed via mid-term exam and quizzes.
- Quizzes are given at the beginning of a class.
- Your research paper should involve an exploratory study related to learning/teaching of mathematics. It must have a clear purpose, well-defined research questions, review of relevant literature, research methods, and preliminary results. The findings in this pilot study should inform your research for MATH 5396 or thesis.
- The last day of class and the final exam time will be used for oral presentation of research papers. The presentation will not be graded but will be considered for students whose grade falls just shy of a letter grade cutoff.

Important Dates:

Census Day (Last day to drop without a “W”)	Sep 11
Course Drop Deadline (Last day to drop with a “W”)	Nov 1
Due Date for Research Paper	Dec 1
Presentation of Research Papers	Dec 12

Grading Policy:

Quizzes & Online Assessments	20%
Mid-term Exam	20%
Homework Assignments	30%
Research Paper	30%

- Make-up Policy:**
- There will be no make-up for assignments and assessments. The lowest score of your assignments and the lowest score of your quizzes will be dropped to allow for one missed assignment/assessment.
 - If you should miss the exam, the possibility of a make-up will be determined on an individual basis. If you cannot provide documentation to support your reason, your exam grade will be counted as the missed-exam grade.

Attendance Policy: Attendance will be taken.

Incomplete Policy: All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. The College of Science allows a period of one month to complete this contract. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

Academic Integrity Policy: Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Refer to the UTEP's Policy at <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>.

Civility Statement: Be punctual. If you are late for class you will not be given extra time to complete your quiz and 20% of your score will be deducted.

Disability Statement: If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

Military Statement: If you are a military student with the potential of being called to military service and/or training during the course of the semester, please inform your instructor as soon as possible.