

# Mathematics Education Courses

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## Courses

### **MTED 5318. Current Topics in Math Educ..**

Current Topics in Mathematics Education (3-0) Develops competencies necessary to deal effectively with mathematics instruction; includes curriculum, concepts, teaching strategies, and skills necessary to integrate content and teaching strategies. May be repeated for credit when topic varies.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **MTED 5320. Rsrch-Based Pract in Math Clas.**

Research-Based Practices in Mathematics Classroom (3-0) Course focuses on what teachers can learn from mathematics education research and how to bridge research and everyday mathematics classroom. Students develop a conceptual discourse on research related to teaching, learning, curriculum, and assessment in school mathematics.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **MTED 5322. Ped Cntent Knowl in Teach Math.**

Pedagogical Content Knowledge in Teaching Mathematics (3-0) Course topics include (but are not limited to) the following main content domains of school mathematics and their effective teaching and learning: Development of Quantitative Reasoning; Fostering Algebraic Thinking; Conceptual Foundations of Calculus; Development of Geometric Thinking.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **MTED 5324. Authent Assess in Math Classrm.**

Authentic Assessment in Mathematics Classroom (3-0) Authentic and performance-based assessment practices in mathematics classroom; use of instruments such as rubrics, portfolios, and individual and group projects as sources of assessment.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

### **MTED 5326. Cult Hist Epistmlgy/Pedag Math.**

Cultural History, Epistemology, and Pedagogy of Mathematics (3-0) The course explores critical issues of the evolution and development of fundamental mathematical ideas from a cultural-historical perspective. The course will also examine current topics in multicultural mathematics education and ethnomathematics.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**MTED 6310. Research Trends in Ma/Sc Edu.**

An exploration of contemporary issues as related to research and practice in the field of Math/Science Education. Includes discussions of diverse theoretical frameworks.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**Major Restrictions:**

Restricted to majors of TLC

**MTED 6320. Cult-Hist Epist and Did of Mat.**

Explores critical, epistemological and historical issues and influences in the development of fundamental mathematical ideas and their implications for learning and teaching school mathematics. It also examines the history of mathematics education, multicultural mathematics education, and ethnomathematics.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**Major Restrictions:**

Restricted to majors of TLC

**MTED 6330. Tchr Devlpmt in Math/Sci Ed.**

This course examines and analyzes research on the preparation and professional development of mathematics and science educators. Driving questions include but are not limited to: (1) to what extent does teacher knowledge, skill, and disposition affect quality learning and achievement opportunities for students; (2) what kinds of teacher learning experiences are effective in transforming beliefs about teaching practice and learning math and science; and (3) how do teacher education programs as well as national and state standards and policies have an impact on the development of mathematics and science teachers? Prerequisite: Departmental approval.

**Department:** Mathematics Education

**3 Credit Hours**

**3 Total Contact Hours**

0 Lab Hours

3 Lecture Hours

0 Other Hours

**Major Restrictions:**

Restricted to majors of TLC