

**MATHEMATICS
EDUCATION** **MTHE**

**Program in Mathematics Education
College of Natural Science**

430 History of Mathematics
Spring. 3(3-0) P: MTH 133 and MTH 301 SA: SME 430

Development of mathematical thought from ancient times to the present, selected from Egyptian, Babylonian, Mayan, Greek, Indian, and Arab contributions to mathematics and to the context of today's school mathematics curriculum.

800 Problems in Mathematics for Teachers
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 15 credits in all enrollments for this course. RB: Elementary Certification or Secondary Certification in Mathematics Education R: Open to graduate students in the Mathematics Education Major. Approval of department.

Supervised study of problems or issues in mathematics education.

840 Critical Content of School Mathematics: Numbers and Operations
Spring of odd years. 3(3-0) R: Open to graduate students. SA: SME 840

Mathematical foundations of numbers, number systems, and related algorithms. Historical development. Development in school curriculum. Research on teaching and learning.

841 Critical Content of School Mathematics: Algebra
Fall of odd years. 3(3-0) RB: MTH 310 and MTH 320 R: Open to graduate students. SA: SME 841

Mathematical foundations of algebra. Historical development. Development in school curriculum. Research on teaching and learning.

842 Critical Content of School Mathematics: Geometry
Spring of even years. 3(3-0) RB: MTH 330 or MTH 432 R: Open to graduate students. SA: SME 842

Mathematical foundations of geometry. Instructional materials. Historical development. Development of geometry in school curriculum. Research on teaching and learning.

879 Teaching College Mathematics
Fall of even years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Counseling, Educational Psychology and Special Education and Mathematics and Teacher Education. Administered by Mathematics Education. RB: Past or concurrent mathematics teaching experience. SA: SME 879

Curriculum materials, case studies, approaches to teaching and student learning of particular mathematics topics.

890 Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to master's students. SA: SME 890
Individualized study for master's level students.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to master's students in the Mathematics Education Major. Approval of department.
Master's thesis research.

926 Proseminar in Mathematics Education I
Fall of odd years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Teacher Education. Administered by Mathematics Education. SA: SME 926
Research on the learning and teaching of mathematics. Focus on curriculum, discourse, equity and teacher education.

927 Proseminar in Mathematics Education II
Fall of even years. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Teacher Education. Administered by Mathematics Education. SA: SME 927
Research on the learning and teaching of mathematics. Focus on teaching, student learning, assessment and policy.

954 Design and Methods in Mathematics Education Research
Fall. 3(3-0) Interdepartmental with Counseling, Educational Psychology and Special Education and Teacher Education. Administered by Mathematics Education. RB: (MTHE 927) and at least one approved research methods course. SA: SME 954
History, current trends, and issues pertaining to research design and methods in mathematics education research. Mathematics education research in the areas of policy, teaching, teacher learning, and student learning with particular attention to how research design influence research findings.

990 Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to doctoral students. SA: SME 990
Individualized study for doctoral level students.

995 Research Practicum
Spring. 3 credits. RB: MTHE 954 R: Open to graduate students in the Mathematics Education Major. Approval of department.
Supervised research practicum. Design, execution, analysis, presentation, critique, and revision of research projects.

997 Special Topics in Mathematics Education
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. SA: MTH 997, SME 997
Advanced topics in mathematics education.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 30 credits in all enrollments for this course. RB: MTHE 926 and MTHE 927 and MTHE 954 SA: SME 999
Doctoral dissertation research.