MTE: MATHEMATICS EDUCATION

Courses

MTE 507. Foundations of Secondary Mathematics Education. 3 Credits.
Research methods in mathematics education; forces which have shaped mathematics education; classroom implications of 20th-century learning theorists; assessment in the classroom; methods of organizing for instruction; cultural and gender considerations.

MTE 508. Jr. High School Math - Curriculum, Instruction, and Assessment. 3 Credits.
This course will focus on the curricula, methods of instruction, and assessment techniques used to teach mathematics in middle school. Course topics will include the real numbers, ratios, rates, proportions, percents, fractions, mixed numbers, pre-algebra, algebra, geometry, probability, and statistics. Teachers will also explore strategies that can be used to integrate technologies into the mathematics classroom.
MTE 508 Prerequisite: Successful completion of MTE 507, with a minimum grade of C-.

MTE 512. Sr. High School Math - Curriculum, Instruction and Assessment. 3 Credits.
This course will focus on the curricula, methods of instruction, and assessment techniques used to teach mathematics in a senior high school setting. Course topics will include geometries, algebra II, trigonometry, precalculus, and discrete mathematics. Teachers also will explore strategies that can be used to integrate the scientific and graphing calculator, computer, and the new CD-ROM technologies into the mathematics classroom.
MTE 512 Prerequisite: Successful completion of MTE 507, with a minimum grade of C-.

MTE 552. Teaching Children Mathematics II. 3 Credits.
A continuation of the pedagogical strategies and methods for teaching the topics covered in MAT 351/MTE 553 extended to topics such as real numbers, geometry, percent, proportional reasoning, measurement, and algebra.
MTE 552 Prerequisite: Successful completion of MTE 553, with a minimum grade of C-. Field Clearances.

MTE 553. Teaching Children Mathematics I. 3 Credits.
In-depth treatment of current pedagogical strategies and materials for teaching concepts including: early number sense; place value; addition, subtraction, multiplication, and division of whole numbers; and fractions in an elementary classroom.
MTE 553 Prerequisite: Successful completion of two mathematics courses, with minimum grades of C-.

MTE 557. Teaching Mathematics to Exceptional Children. 3 Credits.
An exploration of the literature and current practices in teaching mathematics to exceptional children in K-12 classrooms that focuses on the content, pedagogy, and pedagogical-content knowledge related to equitable and effective K-12 mathematics instruction. Emphasis on responding to interventions, assessing mathematics learning formatively, and developing strategies and interventions that target specific difficulties in learning mathematics. The activities and projects in this course are designed to develop the mathematical confidence, problem-solving skills, and communication skills of prospective teachers of exceptional students so that they can support all learners in seeing themselves as mathematicians.
MTE 557 Prerequisite: Successful completion of EDA 542, with a minimum grade of C-.
Distance education offering may be available.

MTE 595. Topics in Mathematics Education. 1-3 Credits.
Topics announced at time of offering.

MTE 599. Independent Study. 3 Credits.
Students will work independently on a mathematics education topic of their choice under the aegis of a Mathematics Department mathematics education faculty member.

MTE 604. Research Seminar. 3 Credits.
This course will focus on the study of research in mathematics education. Contemporary topics of research will be discussed and perused. Students will be expected to report on a topic of research of their choosing. In addition, empirical study and design will be discussed along with data analysis and the reporting of results.

MTE 610. Thesis. 3-6 Credits.
Students will conduct a literature search, develop a thesis proposal, and begin research under the guidance of a mathematics education faculty member.