

MATH EDUCATION (MTED)

MTED 5002 - Elementary Mathematics Teaching I (3 Credits)
Prepares elementary teachers to teach mathematics to PreK-6 students while applying principles of the National Council of Teachers of Mathematics to mathematical learning. Teachers explore ways to help all elementary students become flexible and resourceful mathematical problem solvers. Cross-listed with MTED 4002. Restriction: Restricted to students in the Teacher MA or undergraduates in the BAMA. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: TCHR-MA plan or BMA subplan.

MTED 5003 - Elementary Mathematics Teaching II (3 Credits)
Develops the mathematical and pedagogical understandings and competence of elementary teachers, focusing on instructional assessment, principles, and practices. Cross-listed with MTED 4003. Prereq: MTED 4002 or MTED 5002. Restriction: Restricted to students in the Teacher MA or undergraduates in the BAMA. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: MTED 5002 or MTED 4002. Restriction: TCHR-MA plan or BMA subplan.

MTED 5030 - Theories Of Mathematics Learning (3 Credits)
Develops educators' knowledge of foundational theories and conceptual frameworks in mathematics education. MTED 5030 and 7030 are cross-listed. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5040 - Mathematics Teaching - Theory and Practice (3 Credits)
Develops educators' research-based understandings and practices of PreK-12 mathematics teaching and learning. MTED 5040 and 7040 are cross-listed. Repeatable. Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

MTED 5050 - Critique Of Mathematics Education Research (3 Credits)
Develops educators' understanding of various research studies in mathematics education, including research focusing on mathematics teaching and learning, attending to students' mathematical reasoning, and teaching mathematics for social justice and equity. Increases educators' competence, confidence and enthusiasm in critiquing research. MTED 5050 and 7050 are cross-listed. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5060 - Developmental Pathways In Students' Mathematical Thinking (3 Credits)
Fosters educators' development of research-based ways of determining (a) what to look for, (b) how to look for, (c) how to synthesize and report on, and (d) how to incorporate in pedagogy data-grounded inferences about children's mathematical thinking. MTED 5060 and 7060 are cross-listed. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5070 - (Re)Humanizing the Teaching and Learning of Mathematics (3 Credits)
Expands educators' conceptions of society's role in determining what counts as mathematics to be taught and learned. Develops understanding of historical and systemic marginalization in mathematics education. Increases abilities to address issues of privilege and oppression that impact students' opportunities. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5300 - Curriculum and Methods for Teaching Mathematics (3 Credits)

Fosters teachers' use of task-based mathematics pedagogy, including orchestrating students' mathematical discourse, to develop mathematics classrooms in which the teacher builds from students' current understandings, accommodates for students' differences, and has high expectations for all students. Cross-listed with MTED 4300. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5301 - Assessment and Equity in Mathematics Instruction (3 Credits)
Examines mathematics assessment and equity from both a teacher's and a student's perspective. Focuses on assessment as a process, during which a teacher gathers evidence of students' mathematical knowledge and understanding and then uses that evidence to make instructional decisions. Prereq: Concurrent enrollment in an internship or permission of instructor. Cross-listed with MTED 4301. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5400 - Mathematics for Elementary Teachers (3 Credits)
Key mathematical concepts for K-6 teachers informed by NCTM & Common Core State Standards, such as place-value number systems, rational, proportional, & algebraic reasoning, geometrical concepts, & statistical/probability ideas. Students' meaningful, enjoyable learning is promoted via problem solving activities. Cross-listed with MTED 3040. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5619 - Expanding Conceptions of Number: Quantity and Operation (3 Credits)
Teachers' learning will focus on quantities and operations in place value number systems, how students understand such systems, and how teaching may promote students' progress. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5620 - Developing Fractional & Proportional Reasoning (3 Credits)
Teachers' learning will focus on quantities and operations involved with ratio, fraction, and proportion; and on how students understand ratio, fraction and proportion; and how teaching may promote students' progress. Max hours: 3 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 3.

MTED 5621 - A World of (Different) Numbers: Quantity and Operation (3 Credits)
Develops K-12 teachers' understanding of number systems and the ability to foster students' understanding. Focuses on number, quantity, and operation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 4621. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5622 - Expanding Conceptions of Algebra (3 Credits)
Develops K-12 teachers' understanding of algebra concepts and the ability to foster students' understanding. Focuses on equivalence, variable, covariation, and function. Applicable to teaching students at all grade levels in line with the K12 Common Core Standards. Cross-listed with MTED 4622. Max hours: 3 Credits.

Grading Basis: Letter Grade

MTED 5623 - Geometrical Ways Of Reasoning (3 Credits)
Develops K-12 teachers' geometrical reasoning and the ability to foster students' reasoning. Addresses transformation, measurement, classification, objects, imagery, formulas, and investigation. Applicable to teaching students at all grade levels in line with the K-12 Common Core Standards. Cross-listed with MTED 4623. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 5840 - Math Education Independent Study (1-6 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MTED 7030 - Theories Of Mathematics Learning (3 Credits)
Develops educators' knowledge of foundational theories and conceptual frameworks in mathematics education. MTED 5030 and 7030 are cross-listed. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 7040 - Mathematics Teaching - Theory and Practice (3 Credits)
Develops educators' research-based understandings and practices of PreK-12 mathematics teaching and learning. MTED 5040 and 7040 are cross-listed. Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.

MTED 7050 - Critique Of Mathematics Education Research (3 Credits)
Develops educators' understanding of various research studies in mathematics education, including research focusing on mathematics teaching and learning, attending to students' mathematical reasoning, and teaching mathematics for social justice and equity. Increases educators' competence, confidence and enthusiasm in critiquing research. MTED 5050 and 7050 are cross-listed. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 7060 - Developmental Pathways In Students' Mathematical Thinking (3 Credits)
Fosters educators' development of research-based ways of determining (a) what to look for, (b) how to look for, (c) how to synthesize and report on, and (d) how to incorporate in pedagogy data-grounded inferences about children's mathematical thinking. MTED 5060 and 7060 are cross-listed. Max hours: 3 Credits.
Grading Basis: Letter Grade

MTED 7840 - Math Education Independent Study (1-6 Credits)
Repeatable. Max Hours: 9 Credits.
Grading Basis: Letter Grade
Repeatable. Max Credits: 9.