MATHEMATICS EDUCATION (MTHE)

MTHE 235 Mathematics for Elementary Teachers I (3 credits)
Mathematical development of arithmetic and problem solving as those subjects are currently taught in elementary schools. Three lectures and one 1-hour lab per week. Typically Offered: Fall, Spring.

MTHE 236 Mathematics for Elementary Teachers II (3 credits)
Mathematical development of informal geometry, problem solving, and probability and statistics as those subjects are currently taught in elementary schools. Three lectures and one 1-hour lab per week.
Prereqs: MTHE 235

MTHE 409 Algebraic and Functional Reasoning (3 credits)
Examines the understandings that are foundational to advanced algebraic concepts, and how grade 5-10 students develop these ideas. Topics include strategies for solving equations and systems, covariational reasoning, properties of linear, quadratic, exponential, and trigonometric functions.

MTHE 410 Proof and Viable Argumentation (3 credits)
Develops viable argumentation as it can be found in grades 5-10 as a means of learning content, deepening understanding, and determining what is true and what is false mathematically. Topics include the language of argumentation, argument types, reasoning types, the distinction between proofs and viable arguments. Emphasizes how different argument types can contribute to student learning and increasing student discourse.

MTHE 513 Problem Solving Through History (3 credits)
Historical study of approaches to solving problems in geometry, number theory, and set theory. This course is specifically designed for the M. A. T. program in Mathematics and will not satisfy the requirements of other mathematics degree programs.

MTHE 516 Groups and Symmetry (3 credits)
Exploration of groups, symmetry, and permutations. This course is specifically designed for the M. A. T. program in Mathematics and will not satisfy the requirements of other mathematics degree programs.