MATHEMATICS EDUCATION (MED)

MED 200 FOUNDATIONS OF TEACHING MATHEMATICS 7-12 AND FIELD EXPERIENCE
3, 1.5/0
Prerequisites: MAT 161 or permission of instructor. Current policies and practices in the field of mathematics education including content and pedagogy, national and state standards, and psychological, social, cultural and gender factors that affect the teaching and learning of mathematics. Field experiences in secondary mathematics classrooms that feature racial and ethnic diversity, diversity in SES, and include students with diverse mathematical abilities as well as those identified as having special needs. Offered fall only.
Equivalent Course: SED 200

MED 300 FIELD EXPERIENCE: METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS
3, 2/0
Corequisite: MED 308. Supervised field experience at the middle and/or high school level. Emphasis on implementing pedagogical knowledge, understanding, and practice consistent with state and national mathematics teaching standards discussed in MED 308. Students design and deliver lessons and assessments in a variety of settings (i.e. small group, large group) during 30 hours of clinical experience at local schools. Offered spring only.

MED 307 USES OF TECHNOLOGY IN THE TEACHING OF MATHEMATICS
3, 3/0
Prerequisites: Upper division status and permission of instructor. 15 hours of field experience required. Equipment and software available for use in the mathematics classroom. Effective use of technology in exploration and development of concepts, problem solving, development of lessons, and assessment of educational potential of current and new technologies. Production and evaluation of projects for use in the mathematics classroom. Offered spring only.
Equivalent Course: SED 307

MED 308 METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS
3, 3/0; IN23, RE23
Prerequisite: Minimum of 30 hours of MAT courses completed with a GPA of 2.75. Minimum of 9 hours of Professional courses including MED 200 and MED 307 with a GPA of 2.5. Permission of instructor. Corequisite: MED 300. Introduction to research-based teaching practices that lead to success for all students; teaching practices that support learning in culturally responsive environments and respond to learners with unique needs; instruction that effectively integrates technology; national and state standards and standards-based curricula; national and international achievement data; assessment practices; lesson design. Offered as needed.

MED 309 TEACHING MATHEMATICS IN THE MIDDLE SCHOOL
3, 3/0
Prerequisites: Must be enrolled in 0524; a minimum of 24 hours of the math concentration completed with a GPA of 2.5 or higher; a minimum of 6 hours of professional education courses completed with a GPA of 2.5 or higher; permission of instructor. Preparation to teach mathematics in grades 5-9. Includes techniques and models used to teach mathematics at the middle-school level in the context of current research on how children learn mathematics. Offered spring only.

MED 383 LEARNING AND TEACHING PROBLEM SOLVING
3, 3/0
Prerequisites: CWP 102, MAT 162 or MAT 127, MAT 270, upper-division status. Experiences in mathematical problem-solving; learning through problem-solving; consideration of diverse perspectives and problem-solving approaches; strategies for teaching the use of a problem based approach; the historical and current roles of problem solving in secondary mathematics. Offered spring only.

MED 406 STUDENT TEACHING OF MATHEMATICS IN THE LOWER MIDDLE GRADES 5-6
6, 0/0
Prerequisites: Completion of MED 200, MED 307, MED 309, MED 383W, SPF 303, all required mathematics courses, and 6 credit hours of upper-division mathematics courses; minimum GPA of 2.5 in all mathematics and education coursework; senior status. Lower middle school laboratory experiences, goals of lower middle school education, psychological influences, teaching models, assessment techniques, classroom management, total involvement in lower middle school activities, practicum. Offered occasionally.

MED 407 STUDENT TEACHING OF MATHEMATICS IN JUNIOR HIGH/MIDDLE SCHOOL
6, 0/0
Prerequisites: Completion of MED 308 and MED 300 or MED 309 with a minimum grade of C; completion of all mathematics coursework; minimum cumulative GPA of 2.5 in all major mathematics courses; completion of all education courses with a minimum cumulative GPA of 2.5; senior status; and instructor permission. Supervised teaching experience five full days a week for approximately eight consecutive weeks in an early secondary mathematics classroom. Effective demonstration of content knowledge, pedagogical preparation, instructional delivery, classroom management, knowledge of student development, collaboration with school professionals, and reflectivity of practice required. Offered every semester.

MED 408 STUDENT TEACHING OF MATHEMATICS IN HIGH SCHOOL
6, 0/0
Prerequisites: MTS major; completion of MED 308 and MED 300 with a minimum grade of C; completion of all mathematics degree coursework; minimum cumulative GPA of 2.5 in all major mathematics courses; completion of all education courses with a minimum cumulative GPA of 2.5; senior status; and instructor permission. Supervised teaching experience five full days a week for approximately eight consecutive weeks in an early secondary mathematics classroom. Effective demonstration of content knowledge, pedagogical preparation, instructional delivery, classroom management, knowledge of student development, collaboration with school professionals, and reflectivity of practice required. Offered every semester.

MED 495 SPECIAL PROJECT
1-3, 0/0
Research project at the undergraduate level with a focus on mathematic education in middle/high schools.

MED 499 INDEPENDENT STUDY
3-12, 0/0
Offered every semester.