MED 200 FOUNDATIONS OF TEACHING MATHEMATICS 7-12 AND FIELD EXPERIENCE
3, 1.5/0; DI14
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 every semester.
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 every semester.
Equivalent Course: MED 308W

MED 307 USES OF TECHNOLOGY IN THE TEACHING OF MATHEMATICS
3, 3/0
Equivalent Course: SED 307

MED 308 METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS
3, 3/0; CT14, IM14, WIIF
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 2.75. Permission of instructor. Corequisite: MED 300. Introduction to the research based practice of classroom teaching for the prospective secondary mathematics teacher. Students create lesson plans for instruction that engages all learners through the use of virtual and concrete models, technology, innovative curricula, and mathematical modeling; evaluation and assessment; meeting the needs of diverse learners; classroom management in a variety of settings (i.e., small group, large group). Lectures, peer presentations, construction and critique of lesson plans, use of media, and research of teaching strategies. Offered every semester.
Equivalent Course: MED 308W

MED 309 FIELD EXPERIENCE: METHODS IN TEACHING OF SECONDARY SCHOOL MATHEMATICS
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. Corequisite: MED 308. 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; WIIF
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 every semester.
Equivalent Course: MED 383W

MED 385 USES OF TECHNICAL AIDS IN THE TEACHING OF MATHEMATICS
3, 0/0
See the Undergraduate Course Catalog (http://catalog.buffalostate.edu/undergraduate/docs/currentugcat.pdf).
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
See the Undergraduate Course Catalog (http://catalog.buffalostate.edu/undergraduate/docs/currentugcat.pdf).

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