

MTT 202/Teaching Mathematics in the Early Childhood and Elementary Classroom **1 course unit**

(with field placement)

(every semester)

Prerequisite: MAT 105, MAT 106, or MAT 200 or by permission of Math. Ed. coordinator

Corequisite: MST 202

This course examines the early childhood and elementary mathematics curricula, how children learn mathematics, methods and strategies appropriate for teaching the many topics in mathematics. Students will be introduced to national and state standards for preK-5 mathematics, and learn how to teach according to these standards. Topics include the use of manipulatives and technology in teaching mathematics, learning theories, adaptations for diverse learners, and the investigation of standards-based curricula. A field experience is a critical component of this course. The student will observe and participate in the early childhood, elementary or middle school classroom of an exemplary mathematics teacher 3 hours per week.

MTT 370/Special Topics in Mathematics Education **1 course unit**

(every semester)

Prerequisite: MAT 105 or MAT 200 are a prerequisite.

This course covers a variety of topics in Mathematics Education.

MTT 380/Methods of Teaching Mathematics I **1 course unit**

(fall)

Prerequisites: MAT 200, MAT 205, and MAT 229

This course is the first in a two-course sequence of professional courses for mathematics education majors. Students will be introduced to national and state standards for K-12 mathematics and learn how to teach according to these standards. Topics will include the use of manipulatives, technology in teaching mathematics and the investigation of standards-based curricula. These topics will be mostly situated in the context of middle school mathematics. This is a writing intensive course.

MTT 390/Methods of Teaching Mathematics II **1 course unit**

(spring)

Prerequisites: MTT 380

Corequisites: SED 399 and SPE 323

This course is the second in a two-course sequence of professional courses for mathematics education majors. Students will be familiar with the standards for 9-12 mathematics, and will engage in exploring topics from Discrete Math, Algebra, Geometry, Precalculus, and Calculus. These topics will be examined with the perspective gained from MTT 380 along with that gained from research. Manipulatives, models, software, and calculators will be used to explore appropriate topics from each area. Classroom organization and management will also be explored. The course will be taken as part of a junior block of courses that share a field placement.

MTT 391/Independent Study in Mathematics Education **variable course units**

This course is an upper level course for students interested in studying topics that are not covered in the regularly offered courses. To register for the course a student must contact a faculty member of the department who will serve as a mentor of the independent study. Students must have completed either MTT 202 or MTT 380 with at least a grade of B to register for the course.

MTT 393/Independent Research in Mathematics Education **variable course units**

This course is an upper level course in which students engage in research experiences in mathematics education that constitute new research for the student. Students work in collaboration with a faculty member and/or with fellow student researchers and a faculty mentor. The student will be expected at the end of the semester to write a paper which will be presented to the department or at a mathematics education conference. To register for the course a student must make arrangements with a faculty member of the department who agrees to serve as a

research mentor. Students must have completed either MTT 202 or MTT 380 with at least a B to register for the course.

MTT 490/Student Teaching

2 course units

(every semester)

Prerequisites: MTT 390 and meeting all the criteria for admission for student teaching including completion of all required mathematics courses and cumulative average of at least 2.75.

Corequisite: SED 498

Student Teaching during the senior year under direct supervision of approved public school and general supervision of college supervisors. Observation, participation, and responsible teaching.

MTT 491/Global Student Teaching

2 course units

(every semester)

Prerequisites: MTT 390 and meeting all the criteria for admission for student teaching including completion of all required mathematics courses and cumulative average of at least 2.75.

Corequisite: SED 498

Student teaching abroad during the senior year under direct supervision of approved public school and general supervision of college supervisors. Observation, participation, and responsible teaching. Student will spend half of the semester abroad and half in a local school.

MTT493/Independent Research in Mathematics Education II

variable course units

This course is an upper level course in which students engage in research experiences on advanced mathematics education topics that constitute new research for the student.

Students work in collaboration with a faculty member and/or with fellow student researchers and a faculty mentor. The student will be expected at the end of the semester to write a paper which will be presented to the department or at a mathematics education conference. To register for the course a student must make arrangements with a faculty member of the department who agrees to serve as a mentor of the independent research. Students must have completed MTT 393 with at least a B to register for the course.