MAED 440 : Teaching Mathematics to Urban Learners in Grades K-8

A. Course Description

Credits: 4

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

This course provides students with the knowledge and experience of intermediate and middle school mathematics to be an effective teacher in urban, multicultural classrooms. The content of this math methods course emphasizes the interconnectedness of curriculum, instruction and assessment. The overarching philosophical framework for this course is the social justice perspective of mathematics education particularly for urban students. Field experience in an intermediate or middle school mathematics classroom is required. Prerequisites for Mathematics Teaching majors: EDU 300 Assessment of Learning and Teaching in Urban Grades 5-12 and EDU 306 Urban Middle School and High School Methods and at least 24 credits of Math courses required for the Mathematics Teaching major. Prerequisite for Urban Elementary Education majors: MATH 106 Math for Elementary Teachers AND one of the following: MATH 110 Math for Liberal Arts OR MATH 115 College Algebra OR STAT 201 Statistics I. Corequisite Mathematics Teaching Majors: EDU 450 Advanced Urban Teaching Practicum and Seminar if plans are to student teach in an urban high school.

B. Course Effective Dates: 12/18/2007 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Analyze and describe reform efforts and issues that impact 4th to 8th grade mathematics in urban schools, including the various NSF (National Science Foundation) curricula in addition to state and national standards.
2. Compare and contrast the various math programs/curricula and assessments used in grades 4-8.
3. Examine the achievement gap in mathematics, and be able to advocate for equity in the learning opportunities and achievement of urban students.
4. Plan, develop and implement a lesson and a unit that is inquiry-based and promotes higher order thinking for 4th to 8th graders.
5. Review, analyze, and discuss professional resources (e.g., websites, journals and organizations) available to teachers of mathematics.
6. Review, contrast, and apply various instructional models for teaching and learning math in grades 4-8, including differentiating instruction, integrating technology into instruction, and creating the necessary conditions for a classroom environment conducive to mathematics learning of diverse urban learners.
7. Review, describe, and apply substantive ways to connect the content of 4th to 8th mathematics with diverse urban students (e.g. community connections, culture, art, history, science, music, sports, etc.)

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

Community Engagement
Note: Admission to the Urban Teacher Program and department approval is required to register. Field experience in an urban K-8 mathematics classroom is required. See course description for prerequisite information. This course should be taken within two semesters of student teaching.