A. Course Description

Credits: 4

Prerequisites: EDU 300 Assessment of Learning and Teaching in Urban Grades 5-12 AND EDU 306 Urban Middle School and High School Methods

Lab Hours/Weeks: Corequisites: None

Lecture Hours/Week: MnTC Goals: None

This course provides students with the knowledge and experience of high 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 a high school mathematics classroom is required.

B. Course Effective Dates: 08/19/2019 - 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 9th to 12th 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, curriculum tracks and pathways, and assessments used in grades 9-12 as part of the district, local and state accountability.

3. Examine the achievement gap in high school mathematics, and be able to advocate for equity in the learning opportunities and achievement of urban high school students related to curricular "tracks", graduation requirements and post secondary options.

4. Plan, develop and implement a lesson and a unit that is inquiry-based and promotes higher order thinking for high school students grades 9-12.

5. Review and discuss graduation requirements for math at the district and state levels.

6. Review, analyze, and discuss professional resources (e.g., websites, journals and organizations) available to teachers of mathematics.

7. Review, contrast, and apply various instructional models for teaching and learning math in grades 9-12, including differentiating instruction, integrating technology into instruction, and creating the necessary conditions for a classroom environment conducive to mathematics learning of diverse urban learners.

8. Review, describe, and apply substantive ways to connect the content of 9th to 12th mathematics with diverse urban students (e.g. community connections, culture, art, history, science, music, sports, careers, real-life applications, etc.)

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information
Note: Admission to the Urban Teacher Program and field experience in a high school mathematics classroom, or approval of the Department of Mathematics and Statistics, is required for registration. Ideally, this course should be taken within one year of student teaching. Co-requisite: EDU 450 Advanced Urban Teaching Practicum and Seminar. Prerequisites: At least 20 credits of MATH courses required for the Mathematics for Teaching major.