

# Minnesota State University Moorhead

## MATH 302: Mathematics for Early Childhood

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

MATH 110 - Introduction to Mathematics

Corequisites: None

MnTC Goals: None

Development of numeration systems, whole number, integer, rational numbers, geometry, and measurement. The content focuses on appropriate representations and models specifically tied to early childhood education. Open only to majors in Early Childhood Education. Does not substitute for MATH 303 or 304. This course does not apply to the mathematics major or minor requirements.

**B. COURSE EFFECTIVE DATES:** 01/14/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. Students will ask questions to clarify how primary aged children perceive a problem, develop a strategy, and understand different approaches to reasoning and thinking in mathematics.
2. Students will build learning environments where children can construct their own knowledge for learning mathematics.
3. Students will help primary aged children experience mathematics as a way to explore and solve problems in their environment at home and in school through open-ended work that includes child-invented strategies with different problems, games, and authentic situations.
4. Students will plan activities that develop primary aged children's understanding of mathematics and increases their ability to apply mathematics to everyday problems.
5. Students will provide objects, counters, charts, graphs, and other materials to help primary aged children express ideas, and represent and record problem solving through numbers and symbols.
6. Students will select and create a variety of resources, materials, and activities for counting and studying patterns and mathematical relationships.
7. Students will understand how primary aged children learn mathematics to guide instruction that develops children's understanding of number sense and number systems, geometry, and measurement.
8. Students will use field trips, science experiments, cooking and snack times, sports, and games to use math to solve problems, to symbolize phenomena and relationships, and to communicate quantitative information.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted