

Minnesota State University Moorhead

MATH 512: Teaching Proportional Reasoning & Related Topics in Grades 6-12

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is an in-depth study of the mathematics behind the concepts of ratio, proportion, and percent. The course will review educational research and the curricular scope and sequence these topics as they appear in 8-12 curricula. Typical developmental patterns regarding proportional thinking will be examined and students will learn to use the Chelsea Diagnostic Test as a formative assessment. Pedagogical best practices for teaching these topics will then be examined and practiced, including the 10 essential understandings of ratios and proportions identified by the National Council of Teachers of Mathematics (NCTM). Students will apply this material to create a teaching unit that addresses proportional reasoning as it is used in one of the classes they teach or expect to teach.

B. COURSE EFFECTIVE DATES: 09/23/2016 - 02/01/2019

C. OUTLINE OF MAJOR CONTENT AREAS

None

D. LEARNING OUTCOMES (General)

None

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted