Minnesota State University Moorhead

MATH 512: Applied Variation, Proportionality, & Related Topics

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is a comprehensive exploration of variation and proportion and its applications to the world around us. Students will begin by establishing strong skills in solving problems involving proportions. They will then develop the ability to view the worlds of science and engineering through the lens of proportions and variations and establish connections between different branches of mathematics. Finally, students will use their skills to develop methods to enhance understanding of the mathematical relationships that lead to variation, ratio, and proportion.

B. COURSE EFFECTIVE DATES: 02/02/2019 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Solve variation and proportion problems in engineering and scientific descriptions of the natural world.
2. Analyze how variation and proportionality are involved in real life situations.
3. Give examples and explanations of the connections of variation, ratio, and proportion to scientific descriptions of the natural world.
4. Discover through reading and discussion ways of enhancing understanding of mathematical relationships related to variation, ratio, and proportion.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted