

# Minnesota State University Moorhead

## MATH 304: Informal Geometry

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

MATH 303 - Foundations of Number Systems (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: None

Fundamental concepts of plane and solid geometry, measurement, probability, and statistics. Particularly appropriate for early childhood and elementary education majors. Students must have completed MATH 303 with a grade of "C-" or higher. Not open to mathematics majors or minors.

**B. COURSE EFFECTIVE DATES:** 01/29/1999 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Further study of Probability and Statistics
2. Graph Theory (Network Geometry): translating real life situations in to network graphs, deciding if the network is traversable, and whether it has either an Euler path or an Euler circuit.
3. Practical/Measurement Geometry: length, perimeter, area, surface area, volume including the appropriate unit of measures and why the formulas work. Use of non-standard, standard and metric units of measure.
4. Symmetry, Motion Geometry and Tessellations: line, point, rotational symmetry; slides, flips, rotations, dilation and shrinking; tessellations.
5. Euclidean Geometry Vocabulary and Theorems: points, lines, segments, rays, and planes, polygons, polyhedra, congruence, similarity)

### D. LEARNING OUTCOMES (General)

1. Correctly apply geometry vocabulary and concepts

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted