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