



Division: Science/Mathematics **Area:** Mathematics
Course Number: MATH 166 **Course Name:** Mathematics for Elementary Teachers II
Prerequisite: MATH 156
Corequisite: NONE
Hours Required: **Class:** 45 **Lab:** 0 **Credits:** 3 (three)

Course Description/Purpose

This course is a study of elementary probability and statistics, geometry, computer and calculator applications. An emphasis is put on the use of manipulatives and problem solving. The purpose of this course is to provide the future elementary school teacher with a perspective for understanding the mathematics taught in the elementary school.

Major Units

- Problem Solving
- Statistics
- Geometry
- Computer and Calculator Applications

Educational/Course Outcomes

Student learning will be assessed by a variety of methods, including, but not limited to, quizzes and tests, journals, essays, papers, projects, laboratory/clinical exercises and examinations, presentations, simulations, portfolios, homework assignments, and instructor observations.

- Cognitive** Each student will be expected to *Identify/Recognize*. . .
- strategies for computing probabilities and methods of counting;
 - forms for summarizing statistics by way of plots and charts;
 - formulas for computing measures of central tendency and variation;
 - geometric formulas;
 - geometric concepts of two- and three-dimensions;
 - methods of construction;
 - motion geometry;
 - customary and metric measurements

Performance Each student will be expected to *Demonstrate/Practice*. . .

- find the probability of an event in a given experiment;
- find measures of central tendency and dispersion given specific data;
- identify different types of two- and three-dimensional geometric figures;
- find linear, area, and volume measurements;
- work with different systems of units and convert between them;
- construct geometric figures given a straight-edge and a compass;
- use the concepts of congruence and similarity to find dimensions;
- graph equations and inequalities on the number line and/or on the Cartesian Coordinate Plane;
- the use of graphing calculators as it applies to elementary school learning;
- the use of computer software as it applies to elementary school learning;
- the use of Pythagorean Theorem.