MAT 102 - Concepts of Elementary School Mathematics II

Catalog Description:

(A) Focuses on logical reasoning and problem solving. Topics include elementary probability, statistics, geometry and measurement. Prerequisite: MAT 101. Fulfills GE 1; LASR. Notes: Open only to childhood, early childhood and dual education majors. Not open to mathematics majors. (3 cr. hr.)

Course Goals/Objectives:

Upon completion of the course, students will be able to:

- Draw and interpret line graphs, histograms, bar graphs, circle graphs, stem and leaf plots, scatter plots, and box and whisker plots
- Compute and interpret mean, median, and mode
- Compute and interpret measures of variation
- Use all of the above to describe the distribution of data
- Compute probabilities, odds, and expected values
- Precisely describe, classify, and analyze two- and three-dimensional figures using their defining properties
- Determine perimeter, area, surface area, and volume in standard and metric measurement systems
- Solve problems dealing with congruence and similarity of geometric figures
- Perform reflections, rotations, translations and dilations on figures in the plane
- Create tessellations in the plane
- Solve a variety of application problems

Major Topics:

Representing and interpreting data, measures of distribution, theoretical and experimental probability, expected value, counting, geometry of two and three dimensional figures, transformations geometry, and measurement.

Note:

This is a mathematics course not a methods course! The instructor is expected to teach prospective elementary school teachers the math they need to know, and hopefully in the process change any negative attitudes they might have about mathematics, by using and modeling a variety of teaching techniques such as group work, the use of manipulatives, etc.