

MAT 101 - Concepts of Elementary School Mathematics I

Catalog Description:

(A) Focuses on logical reasoning and problem solving. Topics include sets, numeration systems, number theory, rational numbers, decimals, ratio and proportion. 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:

- Apply and adapt a variety of problem solving strategies
- Describe mathematical patterns and use them in problem-solving
- Use the concepts of sets and functions to model and solve problems
- Perform whole number operations in base ten and other bases
- Work flexibly with fractions, decimals, and percentages to solve problems
- Solve problems involving ratio and proportion
- Use manipulatives and models to demonstrate and explain the mathematical concepts
- Work in groups to solve problems

Major Topics:

Topics include problem solving, sets, logical reasoning, numeration systems, whole numbers, algorithms of arithmetic, number theory, rational numbers, decimal numbers, and proportional reasoning.

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.