



Course Outcome Summary

General Education Satisfier Course

Math 156 Mathematics for Elementary Teachers 1

Course Information

Division	Science/Mathematics
Contact Hours	45
Total Credits	3

Prerequisites Math 092, Math 105, or qualifying scores on accepted placements tests within the last 3 years highly recommended..

Course Description

This course is an introduction to the theory of arithmetic to develop understanding and skill in mathematical processes. It consists of set theory, logic, number bases, properties of natural numbers, integers, and rational and real numbers. It also includes financial literacy applications as they apply to elementary and middle school mathematics. An emphasis is put on the use of manipulatives and problem solving. Students will be expected to work with mathematics numerically, graphically, analytically, and verbally. The purpose of the course is to provide the future elementary teacher with a perspective for understanding the mathematics taught in the elementary school.

This course is approved as a General Education competency satisfier.

General Education Goal: Critical Thinking

Competency: Use mathematics to effectively model and evaluate quantitative relationships.

Learning Outcome: Students will apply mathematical concepts and methods to understand, analyze, and communicate in quantitative terms.

General Education Learning Objectives

- Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
- Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
- Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
- Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

Course Outcomes

In order to evidence success in this course, the students will be able to:



Course Outcome Summary

General Education Satisfier Course

Math 156 Mathematics for Elementary Teachers 1

1. Identify and apply problem solving strategies
Applies to General Education Objective
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

2. Apply set theory and logic to solve problems.
Applies to General Education Objective
 - C. Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
 - D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

3. Interconvert between historic numerations systems, other number bases, and the decimal numeration system.
Applies to General Education Objective
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

4. Utilize various algorithms as they apply to operations with real numbers.
Applies to General Education Objective
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

5. Collect and interpret data communicating results using graphs and tables.
Applies to General Education Objective
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
 - D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

6. Utilize ratio and proportion to solve applications problems including dimensional analysis.
Applies to General Education Objective
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

General Education Satisfier Course

Math 156 Mathematics for Elementary Teachers 1

7. Solve application problems relating to finance including the percent equation, simple interest, and compound interest.

Applies to General Education Objective

- B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
- D. Utilize a variety of problem-solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.