



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

General Education Satisfier Course

MATH 154 Mathematics Explorations

Course Information

Division: Science/Mathematics

Contact Hours: 4

Total Credits: 4

Prerequisites: Math 092 or qualifying score on accepted placement tests

Course Description:

This is a college-level mathematics course designed primarily for non-math and non-science transfer majors with the purpose of introducing them to the nature of mathematics as it applies to both the practical and the abstract. Students will gain understanding in the areas of sets, logic, probability, statistics, algebra, geometry and math as they apply to the modern world. The history and the future of mathematics will be interspersed throughout the course as they apply to each topic. Topics will be explored with the use of computers, problem solving, critical thinking and group/self-discovery.

This course is approved as a General Education competency satisfier.

General Education Goal: Critical Thinking

Competency: Mathematics Competency

Learning Outcome: Use mathematics to effectively model and evaluate quantitative relationships

General Education Learning Objectives

- 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
- 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.



Course Outcomes

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

1. Describe the relationships between sets, numerations systems, counting techniques, probability, statistics, and geometric figures in 1, 2, or 3 dimensions, and the use of mathematics in the modern world.

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.
- 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.

2. Demonstrate the use of problem solving strategies and mathematical modeling, including algebra, to solve a variety of problems in statistics, probability, geometry, finance, logic, and the applications of pure mathematics in the modern world.

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.
- 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. Apply problem solving strategies and mathematical modeling to solve a variety of problems in statistics, probability, geometry, finance, logic, and application of pure mathematics to the modern world.

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.
- 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.