

Math 0239: Support Course for Math for Liberal Arts

Credit hours: 2 remediation (in-house) credits with a Pass/Fail grade scheme

Prerequisites: Math 0099 with a grade of C or better and concurrent enrollment in the Math 1139 course with the same section number.

Course Description

This course provides active support for students taking Math 1139 through the use of a just in time remediation approach. Students in this class will also be taking Math 1139 with the same instructor concurrently. The additional two hours per week is used to review and develop key mathematical skills necessary to fully succeed in Math 1139.

Course Objectives

1. Develop the critical thinking and study skills necessary for success in Math 1139
2. Make the transition from developmental mathematics to Math 1139
3. Reach a level of mathematical maturity necessary for success in Math 1139

Learning Outcomes

1. Perform computations involving whole numbers, integers, decimals and fractions, with and without a calculator
2. Convert between percentages, fractions and decimals
3. Simplify algebraic expressions
4. Solve linear equations and inequalities of one variable
5. Use linear equations in one variable to solve word problems
6. Plot ordered pairs and produce ordered pair solutions of two variable equations
7. Construct equations of lines in slope intercept form
8. Organize and present data
9. Recognize and interpret information from circle graphs
10. Find the length of a side of a right triangle using the Pythagorean Theorem
11. Solve problems involving the perimeter and area of rectangles and triangles
12. Solve problems involving the circumference and area of circles
13. Solve problems involving the volume of rectangular solids and cylinders

Course Topics

- I. REVIEW OF ARITHMETIC OPERATIONS (This should be a quick review and be done during the first week of class)
 - a. Add, subtract, multiply and divide whole numbers
 - b. Operations with fractions
 - c. Operations with decimals
- II. ARITHMETIC OPERATIONS ON REAL NUMBERS
 - a. Operations with integers
 - b. Order of operations with real numbers
 - c. Problem solving with real numbers
- III. PERCENTAGES
 - a. Convert between percentages, decimals and fractions
 - b. Solve basic percent problems using percent equations or percent proportions

IV. INTRODUCTORY ALGEBRA

- a. Simplify algebraic expressions by using the distributive property and combining like terms
- b. Solve linear equations of one variable
- c. Solve word problems which require a one variable linear equation
- d. Solve linear inequalities of one variable and graph the solutions on a number line
- e. Solve problems which require a one variable linear inequality (emphasis on problems involving means)

V. GRAPHING

- a. Plot ordered pairs in the xy -plane
- b. Express the solutions of two variable linear equations as ordered pairs
- c. Graph linear equations; identify the slope and y -intercept
- d. Find the equation of a line given information about it
- e. Interpret graphs and draw conclusions about from the graph
- f. Use linear equations of two variables and their graphs to model real world linear relationships

VI. GEOMETRY

- a. Pythagorean Theorem
- b. Perimeter of two-dimensional figures
- c. Circumference of a circle
- d. Area of circles
- e. Area of rectangles
- f. Area of triangles
- g. Volume of rectangular solids
- h. Volume of cylinders