

MAT 050
BASIC MATH SKILLS

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: None

This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems. A discussion of ratios, rates, proportions, and applications of these topics will be included. Course Hours Per Week: Class, 3. Lab, 2. Semester Hours Credit, 4.

LEARNING OUTCOMES:

At the completion of this course, the student should be able to:

- a.) Demonstrate numerical proficiency and knowledge of concepts with respect to whole numbers, fractions, decimals, and ratio/proportion.
- b.) Demonstrate mathematical reasoning ability and number sense.
- c.) Solve multi-step applied problems which require a synthesis of knowledge acquired in course.
- d.) Apply mathematics in a real-world context via a comprehensive project.

OUTLINE OF COMPETENCIES:

- a.) Read and write whole numbers.
- b.) Give the place value of digits in whole numbers.
- c.) Add, subtract, multiply, and divide whole numbers.
- d.) Round whole numbers to an indicated place value.
- e.) Solve word problems and estimate with whole numbers.
- f.) Use divisibility tests to determine if a whole number is divisible by 2, 3, 4, 5, 6, 8, 9, 10.
- g.) Find prime factorizations of whole numbers.
- h.) Use exponents.
- i.) Find the square root of a number.
- j.) Use the order of operations to evaluate expressions.
- k.) Multiply, divide, add, and subtract fractions and mixed numbers.
- l.) Reduce fractions to lowest terms.
- m.) Solve word problems and estimate with fractions.
- n.) Read and write decimal numbers.
- o.) Give the place value of digits in decimal numbers.
- p.) Add, subtract, multiply, and divide decimal numbers.
- q.) Round decimal numbers to an indicated place value.

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- r.) Solve word problems and estimate with decimal numbers.
- s.) Change decimals to fractions and fractions to decimals.
- t.) Write ratios as fractions in lowest terms.
- u.) Use unit rates to find the best buy.
- v.) Write proportions in fraction form and decide if proportions are true.
- w.) Find the missing number in a proportion.
- x.) Use proportions to solve word problems.

REQUIRED TEXTBOOK:

Miller, O'Neill, Hyde. Basic College Mathematics. 2nd ed. McGraw-Hill, 2009.

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 536-7207, ext. 1413 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.