Course Description

Includes operations and problem solving with proper fractions, improper fractions, and mixed numbers without the use of a calculator. Emphasizes applications and includes U. S. customary units of measure. Credit is not applicable toward graduation. Lecture 1 hour per week.

General Course Purpose

The purpose of this course is to develop competency in operations and problem solving with positive fractions necessary to succeed in 100-level math courses.

Course Prerequisites/Co-requisites

Prerequisite: Qualifying placement score

Course Objectives

Upon completing the course, students will be able to:

1.1 Write, simply and compare fractions.
   1.1.1 Express parts of a whole using fraction notation.
   1.1.2 Convert between improper fractions and mixed numbers.
   1.1.3 Express repeated factors using exponents.
   1.1.4 Find the prime factorization of a given number.
   1.1.5 Write fractions in simplest form.
   1.1.6 Compare two quantities in the form of a ratio or rate in simplest form.
   1.1.7 Find the least common multiple (LCM) of two or more whole numbers.
   1.1.8 Find the least common denominator (LCD) of two or more fractions.
   1.1.9 Determine the relationship (<, >, =) between two fractions with unlike denominators.

1.2 Perform operations with fractions.
   1.2.1 Add and subtract fractions and mixed numbers with like denominators.
   1.2.2 Add and subtract fractions and mixed numbers with unlike denominators.
   1.2.3 Multiply fractions and mixed numbers.
   1.2.4 Divide fractions and mixed numbers.
   1.2.5 Simplify expressions involving fractions using order of operation.

1.3 Solve application using U.S. customary units of measurement.

Major Topics to be Included:

1.1 Write, simplify, and compare fractions.
1.2 Perform operations with fractions
1.3 Solve applications using U.S. customary units of measurement.