

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: MTE 1

Credits: 1

Course Title: Operations with Positive Fractions

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. Credits not applicable toward graduation. Prerequisite: Placement recommendation or BSK1. Lecture 4 hours per week for $\frac{1}{4}$ semester.

General Course Purpose: This course is designed to provide understanding and practice in fractions and operations on fractions.

Course Prerequisites and Co-requisites:

Prerequisite: Placement recommendation or BSK1

Student Learning Outcomes:

Upon completing the course, the student will be able to:

- a. Express parts of a whole using fraction notation;
- b. Convert between improper fractions and mixed numbers;
- c. Express repeated factors using exponents;
- d. Find the prime factorization of a given number;
- e. Write fractions in simplest form;
- f. Compare two quantities in the form of a ration or rate in simplest form;
- g. Find the least common multiple (LCM) of two or more whole numbers;
- h. Find the least common denominator (LCD) of two or more fractions;
- i. Determine the relationship ($<$, $>$, $=$) between two fractions with unlike denominators;
- j. Add and subtract fractions and mixed numbers with like denominators;
- k. Add and subtract fractions and mixed numbers with unlike denominators;
- l. Multiply fractions and mixed numbers;
- m. Divide fractions and mixed numbers;
- n. Simplify expressions involving fractions using order of operations; and
- o. Solve applications using U.S. customary units of measurement.

Major Topics to Be Included:

- a. Writing, simplifying, and comparing fractions
- b. Performing operations with fractions
- c. Solving applications using U.S. customary units of measurement

Date Created/Updated (Month, Day, and Year): January 2, 2012