

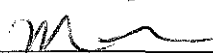


City College of San Francisco
Course Outline of Record

I. GENERAL DESCRIPTION

A. Approval Date	October 2014
B. Department	Transitional Studies
C. Course Number	TRST 2421
D. Course Title	Math Skills Development 2
E. Course Outline Preparer(s)	Julita McNichol
F. Department Chairperson	 Jane Sneed
G. Dean	 Vinicio Lopez
H. Curriculum Committee Chair	 Melinda Weil
I. Vice Chancellor	 Susan Lamb

II. COURSE SPECIFICS

A. Hours	90 Hours
B. Units	Noncredit
C. Prerequisites	None
Corequisites	None
Advisories	TRST 1422 or Placement into TRST 2421
D. Course Justification	A second level math course focusing to prepare students for higher level TRST math course work. Fulfills High School Electives requirements for the City College of San Francisco High School Diploma Program
E. Field Trips	No
F. Method of Grading	Letter, Pass/No pass, SP
G. Repeatability	As needed

III. CATALOG DESCRIPTION

This course focuses on the study of decimal, fractions, ratios, proportions, percentages, basic algebra and geometry.

IV. MAJOR LEARNING OUTCOMES

Upon completion of this course a student will be able to:

- Correctly solve numerical fraction problems in addition, subtraction, multiplication and division.
- Correctly solve numerical decimal problems in addition, subtraction, multiplication and division.
- Solve problems using ratios and proportions.
- Apply the appropriate formula to solve the three different types of percentages problems.
- Apply arithmetic operations to signed numbers and solve numerical problems.
- Use formulas to solve perimeter and area problems.

V. CONTENTS

- A. Fractions
 - 1. Factors, Multiples, Prime numbers
 - 2. Equivalent fractions
 - 3. Lowest Common denominator
 - 4. Four operations with fractions
- B. Decimals
 - 1. Place value and concept of decimal
 - 2. Conversion of decimals to fractions
 - 3. Four operations with decimals
- C. Ratio and Proportion
 - 1. Unit ratio
 - 2. Resolution of problems with ratio and proportion
- D. Percentage
 - 1. Concept that percentage is a portion of the whole
 - 2. Conversion of fractions, decimals and percentages
 - 3. Solve the three different types of percentages problems
 - 4. Practical applications with percentages
- E. Algebra
 - 1. Concept of variable
 - 2. Fundamental order of operations
 - 3. Number Line
 - 4. Operations with signed numbers
- F. Geometry
 - 1. Using perimeter and area formulas
 - 2. Introduction to basic concepts: line, angle, triangle, circle
 - 3. Introduction to volume of three dimensional figures

VI. INSTRUCTIONAL METHODOLOGY

- A. Assignments
 - 1. In class assignments
 - a. Participation time with timed questions and modeling examples of the lesson content
 - b. Small groups of students at the same skill level working on the same assignments solving word problems
 - 2. Out-of-class assignments: Homework assignments for students reviewing class lectures, e.g., after teaching factors, multiples, and prime numbers, the students will take home exercises to practice the concepts. The work will be revised and graded in class
- B. Evaluation
 - 1. Pre and post test to determine mastery of content and skills
 - 2. Grading homework and participation
 - 3. Comprehensive final exam
- C. Textbooks and other instructional materials

1. Robert Mitchell, *Number Power 2: Fractions, Decimals and Percentages*. Contemporary Books, Inc. 2000
2. Robert Mitchell, *Number Power: Pre-Algebra*, Contemporary Books, Inc. 2000
3. *Mathematics: Course 1*, Prentice Hall, 2008/2010
4. Chris McMulle, *Fractions, Decimals, & percentages math workbook: improve your math fluency series*, CreateSpace Independent Publishing Platform, 2012
5. Websites such as www.mathisfun.com and www.purplemath.com

VII. TITLE 5 CLASSIFICATION

NONCREDIT (meets all standards of Title 5. Section 55002(c)).