

**Napa Valley Adult Education
Construction/Trades
Course Outline**

Course Title: Construction Math

CBEDS Title: Introduction to Building and Construction Trades

Grade Level: Adult

Course Title: Construction Math

1. Goal or purpose

The goal or purpose of this course:

Students will gain an understanding of practical applications of basic math functions in regard to whole numbers and fractions. They will learn how to work with length measurements by reading a standard construction measuring tape. Students will also acquire a basic understanding of reading an architect's scale. Extensive work will be done in the area of addition and subtraction of tape measure fractions with an emphasis on finding common denominators. Students will also learn how to convert decimals to fractions and fractions to decimals. An introduction to construction geometry that will include angles, shapes, area and volume will be offered. Students will understand the dynamics of geometry in regard to circumference and radius.

2. Performance Objectives:

Students will be able to:

- A. Use a tape measure
- B. Use formulas to calculate area and volume
- C. Demonstrate their understanding of the architect's scale
- D. Demonstrate their understanding of converting decimals to fractions and fractions to decimals
- E. Demonstrate their understanding of circumference and radius

3. Instructional Strategies:

- Instructor presentation and demonstration
- Communicative /interactive activities
- Problem Solving
- Project-Based Learning
- Field trips and guest speakers

4. Time and Content of Instruction:

The total hours for this course:

= 40 hours

Basic math functions: whole numbers and fractions

Reading a standard construction measuring tape

Reading an architect's scale.

Addition and subtraction of tape measure fractions: finding common denominators

Convert decimals to fractions and fractions to decimals
Introduction to construction geometry: angles, shapes, area and volume
Circumference and radius

5. Evaluation:

The following means of evaluation will be used:

- Performance assessments
- Scores on quizzes, test and worksheets

6. Repetition:

Students may with the consent of the instructor, repeat the class until the desired competencies are reached.

7. Texts and Materials:

NCCER Core Curriculum *Introductory Craft Skills* (English and Spanish versions).

- *NCCER: Core Curriculum: Introductory Craft Skills, 5th Edition (English and Spanish)*
- *Instructor-generated math support materials*