SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS

I. TITLE OF COURSE: MA0013- Basic Arithmetic

II. COURSE DESCRIPTION: 3 **credit hours**
3 **credit hours of lecture and** 0 **credit hours of lab per week.**

This course is for the college student whose grasp of arithmetic skills is currently weak or marginal. Competency at the college level in addition, subtraction, multiplication and division of whole numbers, integers, decimals and fractions as well as ratio, percent, and simple equations will be emphasized. For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected. This course doesn't count towards graduation.

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Pre-requisite: None

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:

The Mathematics Department at Seward County Community College will enhance a student's ability to think critically using mathematical principles, ideas, and concepts in order to function in a society with ever-changing technology.

IV. TEXTBOOK AND MATERIALS:

Bittinger, Beecher, and Johnson, Basic College Mathematics, Pearson, 12th Edition, 2016.

V. SCCC OUTCOMES

Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.

1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life

4: Demonstrate mathematical skills using a variety of techniques and technologies.
5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

VI. COURSE OUTCOMES:

1. Apply the rules and properties for adding, subtracting, multiplying, and dividing whole numbers.
2. Identify the definition and properties of fractions.
3. Reduce fractions and compute problems of adding, subtracting, multiplying, and dividing fractions and mixed numbers.
4. Identify decimal notation and place value.
5. Add, subtract, multiply, and divide decimals.
6. Compute square roots.
7. Identify and compute problems in ratio, proportion, and unit measurement.
8. Identify properties and compute problems of percent.
9. Compute problems related to sales tax and commission.
10. Compute problems related to simple interest.
11. Identify the properties of positive and negative numbers.

12. Add, subtract, multiply, and divide positive and negative numbers.
13. Apply the distributive property to algebraic expressions.
14. Solve linear equations in one variable.
15. Identify Pythagorean Theorem and compute related problems.

VII. COURSE OUTLINE:

1. WHOLE NUMBERS
Standard Notation
Addition
Subtraction
Multiplication
Division
Rounding and Estimating; Order
Solving Equations
Applications and Problem Solving
Order of Operations and Exponential Notation
2. FRACTION NOTATION: MULTIPLICATION AND DIVISION
Factorizations
Divisibility
Fraction a Fraction Notation
Multiplication and Applications
Simplifying
Multiplying, Simplifying, and Applications
Division and Applications
3. FRACTION NOTATION AND MIXED NUMERALS
Lease Common Multiples
Addition and Applications
Subtraction, Order, and Applications
Mixed Numerals
Addition and Subtraction Using Mixed Numerals; Applications
Multiplication and Division Using Mixed Numerals; Applications
Order of Operations, Complex, Fractions, and Estimation
4. DECIMAL NOTATION
Decimal Notation, Order, Rounding
Addition and Subtraction
Multiplication
Division
Converting from Fraction Notation to Decimal Notation
Estimating
Application and Problem Solving
5. RATIOS AND PROPORTIONS
Introduction to Ratios
Rates and Unit Prices
Proportions
6. PERCENT NOTATION
Percent Notation and Fraction Notation
Solving Percent Problems Using Percent Equations
Solving Percent Problems Using Proportions
Applications
Sales Tax, Commission, and Discount
Simple Interest and Compound Interest; Credit Cards
7. DATA, GRAPHS, AND STATISTICS
Average, Medians, Modes, and Range
Interpreting Date from Tables and Graphs
8. MEASUREMENT
American Units

Metric System
Converting between American and Metric
Weight and Mass; Medical Applications
Time and Temperature
Converting Unity of Area
9.   GEOMETRY
Perimeter
Area
Circles
Volume
Angles and Triangles
Square Roots and Pythagorean Theorem
10. REAL NUMBERS
Addition and Subtraction of Real Numbers
Multiplication and Division of Read Numbers
Order of Operations
11. ALGEBRA; SOLVING EQUATIONS AND PROBLEMS
Introduction to Algebra
Solving Equations Using Addition Principle
Solving Equations Using Multiplication Principle
Solving Equations Using Principles Together
Applications

VIII. INSTRUCTIONAL METHODS:

1.   Lecture
2.   Discussions
3.   Textbook Exercises
4.   Video Lessons
5.   Computer Demonstrations/Exercises
6.   Whiteboard Drills

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1.   Textbook
2.   Audio/visual aids
3.   MyMathLab software
4.   Handouts
5.   Online Videos

X. METHODS OF ASSESSMENT:

SCCC Outcome #1 will be assessed using assignments and quizzes. Have students answer questions based on the reading of their textbooks.
SCCC Outcome #4 will be assessed and measured by class participation and tests.
SCCC Outcome #5 will be assessed and measured using assignments, tests, and non-traditional problem solving activities.

XI. ADA STATEMENT:
Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or going to the Student Success Center in the Hobble Academic building, room 149 A.

Syllabus Reviewed: 12/20/2018 15:35:54