

SEWARD COUNTY COMMUNITY COLLEGE COURSE SYLLABUS

I. TITLE OF COURSE: MA0033- Advanced 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.

Pre-requisite: See placement matrix.

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:

1. Marvin L. Bittinger, Prealgebra and Introductory Algebra, Person, 4th Edition, 2016. (optional)
2. MyMathLab Access Code (Given in Class)

V. SCCC OUTCOMES

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

IV. Demonstrate mathematical skills using a variety of techniques and technologies.

V. Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

VI. Exhibit skills in information and technological literacy

VI. COURSE OUTCOMES:

1. To develop and use procedures for performing operations on various kinds of numbers.
2. To solve various basic applications involving fractions, decimals, percents, geometry, and unit analysis.
3. To develop and apply mathematical reasoning.
4. To understand the role variables, play in algebra.
5. To introduce the purpose and use of variables.
6. To understand the basic properties of the set of counting (natural) numbers, (the set of) whole numbers, the set of integers, (the set of) rational numbers, and (the set of) real numbers.
7. To perform the basic arithmetic operations on sets mentioned above (including absolute value).
8. To work with ratios and percents and solve problems involving ratios and percentages.
9. To learn the English and metric systems of measurements, convert between units in both systems, and convert from one system to another, and (to) apply it in problems solving.
10. To use geometric formulas to find perimeter, area, surface area, and volume of 2-

dimensional and 3-dimensional shapes.

11. To identify similar triangle and find lengths of sides of similar triangles using proportions.
12. To solve applied problems involving right triangle using the Pythagorean Theorem

VII. COURSE OUTLINE:

1. Whole numbers, including Addition and Subtraction, Multiplication and Division, Rounding and Estimating, Solving Equations and Applications, Order of Operations and Exponential Notation.
2. Integers and algebraic expressions, including Addition and Subtraction of Integers, Multiplication and Division of Integers, Order of Operations, Algebraic Expressions, like terms and Perimeter, and Solving Equations.
3. Fractions, including Multipliers and Divisibility, Factorizations, Multiplication and Simplifying, Division, Solving Equations, Addition and Subtraction, More Equation Solving, Mixed Numerals and Complex Fractions.
4. Decimal number, including Decimal Notation, Addition and Subtraction of Decimals, Multiplication and Division, and Converting.
5. Percent, including Ratios and Proportions, Percent Notation and Converting, Solving Percent Problems and Applications.
6. Geometry, including Perimeter and Area, Surface Area and Volume, Similar Triangles and Pythagorean Theorem.
7. Unit analysis, including Linear Measures, Weight and Mass, Capacity, Applications, Time and Temperature.

VIII. INSTRUCTIONAL METHODS:

1. MyMathLab Software. A presentation system designed to give students the opportunity to learn new concepts at their own pace through the use of visual and demonstrative software.
2. Lecture. Short lectures will be used to emphasize different concepts of the daily lessons.
3. Assignments. Students will work selected problems in order to involve the student and assure his or her understanding of the skills required for future work.
4. Class Discussions. Questions may be initiated by either the teacher or students at any time during class discussions.
5. Examinations. Tests are frequently used to help summarize concepts and emphasize important skills.
6. Individual Help. Each student is encouraged to come for the instructor's help, providing he or she has been attending class regularly, as he or she has difficulty. Office hours are posted.

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1. MyMathLab computer access which includes the etext, study plan, and videos.
2. Math Resource Center
3. Supplemental texts and library mathematics reference books
4. Supplemental materials available on Canvas.

X. METHODS OF ASSESSMENT:

SCCC Outcome #4 will be assessed and measured by class participation, regular assignments, and tests.

SCCC Outcome #5 will be assessed and measured using assignments, tests, and non-traditional problem-solving activities.

SCCC Outcome #6 will be assessed and measured by using in class assessments.

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 go to the Student Success Center in the Hobbie Academic building, room A149.

Syllabus Reviewed: 5/17/2022