1. **COURSE TITLE\***: Pre-Algebra

**2.** **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*: MATH 1106**

**3. PREREQUISITE(S)\*:**

A student must meet one of the following criteria to register for this course:

-          Two High school STEM or Core Math courses with grades of C or higher

-          Accuplacer QAS with a score of 225 or higher

**COREQUISITE(S)\*: None**

**4. COURSE TIME/LOCATION/MODALITY: (*Course Syllabus – Individual Instructor Specific*)**

**5. CREDIT HOURS\*:** 3 **LECTURE HOURS\*:** 3

**LABORATORY HOURS\*:** 0 **OBSERVATION HOURS\*:** 0

**6. FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***

**7. COURSE DESCRIPTION\*:**

This course is an introduction to elementary algebra. It includes rational numbers, like terms, exponents, and linear equation solving. This course cannot be used to meet general education or math requirements in a program. This course may be able to be used as elective credit toward a degree. Check with an advisor.

**8. LEARNING OUTCOMES\*:**

At the completion of this course the student will:

1. Be able to simplify numerical expressions using negative numbers and to correctly apply order of operations.
2. Be able to add and subtract terms
3. Be able to multiply and divide terms
4. Be able to substitute into formulas and evaluate the formulas
5. Be able to solve first degree equations with one variable
6. Be able to solve application using algebraic expressions
7. Be able to solve applied problems involving percent
8. Be able to solve a literal equation (formula) for a specified variable
9. Be able to use calculators appropriate to the problems solved

**9. ADOPTED TEXT(S)\*:**

# Beginning Algebra

9th edition, Custom Print

Baratto,

Customized Printing, McGraw Hill Publishing Co.

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ISBN: 978-1-308-75563-2

OR

Elementary Algebra 2e

OpenStax

Download for free at

https://openstax.org/details/books/elementary-algebra-2e

Lynn Marecek, MaryAnne Anthony-Smith, Andrea Honeycutt Mathis

**9a: SUPPLEMENTAL TEXTS APPROVED BY FULL TIME DEPARTMENTAL FACULTY (INSTRUCTOR MUST NOTIFY THE BOOKSTORE BEFORE THE TEXTBOOK ORDERING DEADLINE DATE PRIOR TO ADOPTION) \*\*\*.**

**10. OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)\*\***

**None**

**11. GRADING SCALE\*\*\*:**

Grading will follow the policy in the catalog. The scale is as follows:

A: 90 – 100

B: 80 – 89

C: 70 – 79

D: 60 – 69

F: 0 – 59

A student who completes this course without excessive absence will be assigned a letter grade from A through F under these conditions:

• The course includes 3 mastery units that must be completed at an 80% level. A student who does not complete the 3 designated mastery units with an 80% will receive an F in the course.

• A student who completes the three mastery units with at a level of 80% or above will receive a letter grade based on their average grade. An average grade in the 90’s is an A, 80’s is a B, 70’s is a C, 60’s is a D, and lower than that is an F.

**12. GRADING PROCEDURES OR ASSESSMENTS: (*Course Syllabus – Individual Instructor Specific)***

|  |
| --- |
| *Example 1 - By Percent* |
| Homework 10%  Quizzes/Tests 90%  Total 100% |

|  |  |  |
| --- | --- | --- |
| *Example 2* | | |
| *Category* | *By Total Points* | *% of Grade* |
| Homework (20x10) | 200 | 10% |
| Quizzes/Tests  (5x360) | 1800 | 90% |
| Total | 2000 | 100% |

|  |  |  |
| --- | --- | --- |
| *Example 3* | | |
| *Category* | *By Total Points* | *% of Grade* |
| Online Quizzes | 400 | 100% |
| Online Tests  (6x100) | 600 | 15% |
| Notebook  (2x500) | 1000 | 25% |
| Midterm | 1000 | 25% |
| Final | 1000 | 25% |
| Total | 4000 | 100% |

**13. COURSE METHODOLOGY: *(Course Syllabus – Individual Instructor Specific)***

1. The course design provides instruction and materials to support the course objectives. Classes may consist of a variety of means to accomplish this including but not limiting to: lectures, class discussions, small group projects, supplemental materials, and outside assignments. Practice is an important part of the learning process. For every one hour of class time, two additional hours of study time should be expected.
2. The course includes 3 mastery units that must be completed at an 80% level.

1. Departmentally prepared Mastery Tests and departmentally prepared instructional materials are available. All instructors are to use the provided mastery tests for the three mastery units. Sample tests are provided for the other units to be used at the instructor’s discretion.
2. These are the 6-7 Recommended Units

* Unit 1 – Chapter 0
* Unit 2 – Mastery Unit Integers
* Unit 3 – Chapter 1
* Unit 4 – Mastery Unit Terms and Exponents
* Unit 5 – Mastery Unit Equation Solving
* Unit 6A & 6B - Chapter 2 (Except for objectives 1-4 (examples 1-5) in section 2.5 and all of section 2.6) some instructors will divide this unit into two parts.

**14. COURSE OUTLINE: *(Course Syllabus – Individual Instructor Specific)***

*Custom print edition:*

**Chapter 0: An Arithmetic Review – LO1**

0.1 Factors and Multiples

0.2 Fractions and Mixed Numbers

0.3 Decimals and Percents

0.4 Exponents and the Order of Operation

0.5 Positive and Negative Numbers

**Chapter 1: From Arithmetic to Algebra – LO1, LO2, LO3, LO4**

1.1 An Introduction to Real Numbers

1.2 Adding and Subtracting Real Numbers

1.3 Multiplying and Dividing Real Numbers

1.4 Transition to Algebra

1.5 Evaluating Algebraic Expressions

1.6 Adding and Subtracting Terms

1.7 Multiplying and Dividing Terms

**Chapter 2: Equations and Problem Solving – LO5, LO6, LO7, LO8, LO9**

2.1 Solving Equations with the Addition Property

2.2 Solving Equations with the Multiplication Property

2.3 Combining the Rules to Solve Equations

2.4 Formulas and Problem Solving

2.5 Inequalities – An Introduction (optional)

*OpenStax*

**Chapter 1: Foundations – LO1, 2, 4**

1.1 Introduction to Whole Numbers

1.2 Use the Language of Algebra

1.3 Add and Subtract Integers

1.4 Multiply and Divide Integers

1.5 Visualize Fractions

1.6 Add and Subtract Fractions

1.7 Decimals

1.8 The Real Numbers

1.9 Properties of Real Numbers

**Chapter 2: Solving Linear Equations and Inequalities – LO5, 8, 9**

2.1 Solve Equations Using the Subtraction and Addition Properties of Equality

2.2 Solve Equations using the Division and Multiplication Properties of Equality

2.3 Solve Equations with Variables and Constants on Both Sides

2.4 Use a General Strategy to Solve Linear Equations

2.5 Solve Equations with Fractions or Decimals

2.6 Solve a Formula for a Specific Variable

**Chapter 3: Math Models – LO6, 7, 9**

3.1 Use a Problem-Solving Strategy

3.2 Solve Percent Applications

**Chapter 6: Polynomials – LO3**

6.5 Divide Monomials\*

\*Note to instructor: Only cover the quotient property for exponents (examples 356 – 363, 406 – 417)

Recommended Calendar:

Days 1-4 Unit 1

Days 5-8 Unit 2

Days 9-12 Unit 3

Day 13 Math Lab Day

Days 14-17 Unit 4

Day 18 Math Lab Day

Days 19-22 Unit 5

Days 23-26 Unit 6

Day 27 Math Lab Day

Days 28-30 Unit 6

Day 31 Final Exam

**15. SPECIFIC MANAGEMENT REQUIREMENTS\*\*\*:**

**16. FERPA: \***

Students need to understand that their work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**17.** **ACCOMMODATIONS: \***

Students requesting accommodations may contact Ryan Hall, Accessibility Coordinator at [rhall21@sscc.edu](mailto:rhall21@sscc.edu) or 937-393-3431 X 2604.

Students seeking a religious accommodation for absences permitted under Ohio’s Testing Your Faith Act must provide the instructor and the Academic Affairs office with written notice of the specific dates for which the student requires accommodation and must do so no later than fourteen (14) days after the first day of instruction or fourteen (14) days before the dates of absence, whichever comes first. For more information about Religious Accommodations, contact Ryan Hall, Accessibility Coordinator at [rhall21@sscc.edu](mailto:rhall21@sscc.edu) or 937-393-3431 X 2604.

**18. OTHER INFORMATION\*\*\*:**

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.