

**SUFFOLK COUNTY COMMUNITY COLLEGE**  
**COLLEGE-WIDE COURSE SYLLABUS**

**MAT001 (formerly MA01)**

**I. COURSE TITLE:**

Developmental Mathematics Skills

**II. CATALOG DESCRIPTION:**

For the student who needs to learn or strengthen basic arithmetic skills, introductory plane geometry concepts, and to prepare for entry into beginning algebra. Grading in this course determined by mastery of completed topics. Graded on an S-R-U-W basis. *Does not fulfill requirements for any degree or certificate.* Students taking this course must also take MAT007 before enrolling in a college-level mathematics course.

A-E-G / 3 cr. hrs.

**III. COURSE GOALS:**

- A. Reinforce basic arithmetic skills.
- B. Prepare students for a beginning algebra course.

**IV. COURSE OBJECTIVES:**

Upon successful completion of this course, students will be able to:

- A. perform the four arithmetic operations, addition, subtraction, multiplication, and division with the following sets of numbers: whole numbers, decimals, fractions, mixed numbers, and signed numbers;
- B. read and write whole numbers and decimals using correct place values; round off whole numbers and decimals to specified place value;
- C. correctly evaluate arithmetic expressions with the following sets of numbers: whole numbers, decimals, fractions, and signed numbers;
- D. be able to write equivalent forms of a fraction, mixed number, decimal, and percent;
- E. compare the size of decimals, whole numbers, fractions, and signed numbers using the number line and inequality signs;
- F. demonstrate an understanding of ratio and proportion and be able to solve a proportion;
- G. acquire a clear understanding of the concepts of perimeter, area, and volume when applied to simple geometric figures;
- H. evaluate expressions with variables using signed numbers;
- I. develop the ability to analyze appropriate verbal problems.

**V. Topics Outline**

Topics	Approximate Time (Including Examinations)
A. <u>Whole Numbers</u> 1. addition and subtraction a. place value b. applications 2. multiplication and division a. using multi-digit integers b. exponents c. applications 3. order of operations	1 ½ weeks
B. <u>Fractions and Mixed Numbers</u> 1. basic skills 2. addition and subtraction 3. multiplication and division 4. applications	2 ½ weeks

<p>C. <u>Decimals</u></p> <ol style="list-style-type: none"> <li>1. reading and writing decimals</li> <li>2. comparison of size of decimals</li> <li>3. addition and subtraction</li> <li>4. multiplication</li> <li>5. rounding off</li> <li>6. division</li> <li>7. changing a fraction or mixed number to a decimal</li> <li>8. changing a decimal to a fraction or mixed number</li> <li>9. evaluation of decimal expressions using the order of operations</li> <li>10. applications</li> </ol>	1 ½ weeks
<p>D. <u>Ratio and Proportion</u></p> <ol style="list-style-type: none"> <li>1. ratio and rate</li> <li>2. proportion</li> <li>3. solving a proportion</li> <li>4. word problems (including unit conversions)</li> </ol>	2 weeks
<p>E. <u>Percent</u></p> <ol style="list-style-type: none"> <li>1. definition</li> <li>2. interchanging decimals, percents and fractions</li> <li>3. applications</li> </ol>	2 ½ weeks
<p>F. <u>Geometry</u> (must include discussion of units of measurement)</p> <ol style="list-style-type: none"> <li>1. perimeter and area of rectangle and triangle</li> <li>2. circumference and area of circle</li> <li>3. perimeter and area of composite figure</li> <li>4. volume of cylinder and rectangular solid</li> </ol>	2 weeks
<p>G. <u>Signed Numbers</u></p> <ol style="list-style-type: none"> <li>1. definition of absolute value and “signed” numbers</li> <li>2. addition, subtraction, multiplication and division</li> <li>3. evaluating expressions with and without variables</li> <li>4. solving simple linear equations (optional)</li> </ol>	2 weeks

**VI. Evaluation of Student Performance:**

To be determined by the instructor

**VII. Programs that require this course:**

None

**VIII. Courses that require this course as a prerequisite:**

MAT007

**IX. Supporting Information:**

Mathematics tutoring services, as well as video and computer aids, are provided for all students through the Math Learning Center (Ammerman Campus, Riverhead 235), the Center for Academic Excellence (Grant Campus, Health, Sports and Education Center 129), and the Academic Skills Center (Eastern Campus, Orient 213).