



TERM:	INSTRUCTOR:
COURSE CODE: MAT-071	<b>OFFICE HOURS:</b>
<b>COURSE TITLE:</b> Basic Mathematics	OFFICE LOCATION:
DAY(S) AND TIME(S):	EMAIL:
LOCATION:	PHONE:

#### **COURSE PREREQUISITE:**

**CREDITS: 3** 

#### **COURSE DESCRIPTION:**

This course is design to review basic arithmetic concepts, skills and vocabulary, which are required for the study of algebra and for numerical computations. Topics covered include: operations with whole numbers, fractions, decimals, signed numbers; evaluating and simplifying variable expressions; solving simple linear equations; ratios, rates, and proportions; percent; basic statistics and geometry.

### **STUDENT LEARNING OUTCOMES:**

Upon successful completion of Basic Mathematics student will be able to:

- 1. Operate and use the order of operations agreement to simplify numerical expressions involving addition, subtraction, multiplication, division, exponents and square roots of whole numbers, integers, decimals, fractions, and combinations of them.
- 2. Round, estimate and compare different types of numbers.
- 3. Select appropriate problem-solving strategies to estimate, solve and interpret word problems requiring one or more operations.
  - a. Distinguish and calculate the base, amount and percent to solve percent application problems.
  - b. Compute any missing component of: areas, perimeters, radio/diameter, and angles of a triangle.
- 4. Simplify and evaluate variable expressions.
- 5. Translate verbal expressions to variable expressions.
- 6. Apply the addition and/or multiplication property to solve linear equations in one variable and verify the answer.
- 7. Set up and solve a proportion when given a verbal description of a proportional situation in which one quantity is unknown.

## EM STUDENT HUB Information & Resources tailored towards students taking any STEM courses

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#### **TEXTBOOK AND SUPPLEMENTAL MATERIALS:**

Prealgebra & Introductory Algebra, Fifth Edition by Elayn El Martin-Gay, ISBN 13: 978-0-13-470763-1

ISBN 10: 0-13-470763-X

**MyMathLab:** A MyMathLab access code is required for this course. It is bundled with the textbook and sold through the HCCC Bookstore or may be purchased only the Mymathlab code separately. Further instructions regarding MyMathLab will be provided.

Calculators are not permitted to be used at any time.

#### **GRADING POLICY:**

# A student who has not <u>correctly</u> completed at least 70% of the assigned work <u>will not be permitted to</u> take the Exit Exam and will fail the class.

In order to help students demonstrate mastery of the material and prepare for the Exit Exam, there will be three tests given during the semester:

Test 1 (Chapters 1-2) Test 2 (Chapters 1-4) Test 3 (Chapters 5 and 6)

If students do not take Test 1, Test 2, or/and Test 3 on time, because of an incomplete homework, they will receive a penalty; first time: minus 5 points; second time: minus 10 points, and third time: minus 20 points.

Grades are based on the following criteria:

Graded homework	10 %
Test 1	15 %
Test 2	15 %
Test 3	15 %
Exit Exam	45 %

#### SAMPLE COURSE SCHEDULE:

Week	Section	Торіс	Ebook Pages
1	1	THE WHOLE NUMBERS	
	1.2	Place Value, Names for Numbers and Reading Tables	pp. 8-16
	1.3	Adding & Subtracting Whole Numbers and Perimeter	pp. 17-31
	1.4	Rounding and Estimating	pp. 32-39
	1.5	Multiplying Whole Numbers and Area	pp. 40-51

2	1.6	Dividing Whole Numbers	рр. 52-65
	1.7	Exponents and Order of Operations	pp. 68-74
	1.8	Introduction to Variables, algebraic Expressions, and Equations	рр. 75-83
3	2	INTEGERS AND INTRODUCTION TO SOLVING EQUATIONS	
	2.1	Introduction to Integers	pp. 99-107
	2.2	Adding Integers	pp. 108-115
	2.3	Subtracting Integers	pp. 116-123
	2.4	Multiplying and Dividing Integers	pp. 124-132
4	2.5	Order of Operations	pp. 135-141
	2.6	Solving Equations	pp. 142-150
		Review chapters 1 and 2	
4	3	SOLVING EQUATIONS	
	3.1	Simplification of Variable Expressions	pp. 165-174
	3.2	Solving Equations	pp. 175-183
5		TEST 1 (CHAPTERS 1-3)	
6,7	4	FRACTIONS AND MIXED NUMBERS	
	4.1	Introduction	pp. 215-228
	4.2	Factors and Simplest Form	pp. 229-241
	4.3	Multiplying and Dividing Fractions	pp. 242-253
	4.4	Adding and Subtracting Like Fractions	pp. 254-267
	4.5	Adding and Subtracting Unlike Fractions	pp. 268-279
	4.6	Complex Fractions, Order of Operations, and Mixed Numbers	pp. 282-289
	4.7	Operations on Mixed Numbers	pp. 290-306
	4.8	Solving Equations Containing Fractions	pp. 307-315
8	5	DECIMALS	
	5.1	Introduction to Decimals	pp. 332-343
	5.2	Adding and Subtracting Decimals	pp. 344-356
	5.3	Multiplying Decimal	pp. 357-365
	5.4	Dividing Decimals	pp. 366-375
	5.5	Fractions, Decimals, and Order of Operations	pp. 378-386
	5.6	Solving Equations Containing Decimals	pp. 387-391
	5.7	Mean, Median and Mode	pp. 392-399
9		TEST 2 (CHAPTERS 4 and 5)	

10,11	6	RATIO, PROPORTION, AND PERCENT	
	6.1	Ratio and Proportion	pp. 417-426
	6.2	Percents, Decimals, and Fractions	pp. 427-437
	6.3	Solving Percent Problems with Equation	pp. 438-444
	6.4	Solving Percent Problems with Proportions	pp. 445-452
	6.5	Applications of Percent	pp. 455-466
	6.6	Percent and Problem Solving	pp. 467-472
12	8	GEOMETRY	
	8.2	Perimeter	pp. 574-582
	8.3	Area	pp. 583-599
13		TEST 3 (CHAPTER 6 and 8)	
		Exit Exam Review	
14		Departmental Exit Exam	
15		Retake Exit Exam Period	

## HCCC POLICIES, STATEMENTS, AND SERVICES:

https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html

