



SCHOOL OF STEM SYLLABUS



TERM:

COURSE CODE: MAT 070/073

COURSE TITLE: Basic Algebra /Workstop

DAY(S) AND TIME(S):

LOCATION:

INSTRUCTOR:

OFFICE HOURS:

OFFICE LOCATION:

EMAIL:

PHONE:

COURSE PREREQUISITE:

MAT071-Basic Math or Accuplacer Math Computation Score of 78 or above

CREDITS: 1 (MAT70) and 3 (073)

COURSE DESCRIPTION:

This course is designed to help students understand the basic fundamental mathematical concepts. Topics covered include symbols and sets of numbers; exponents; order of operations; adding, subtracting, multiplying, and dividing of real numbers. Solving quadratic equations by factoring, and graphing linear equations.

STUDENT LEARNING OUTCOMES:

Upon successful completion of Basic Algebra, student should be able to do the following:

1. Solve systems of linear equations and inequalities of one or two variables, including application problems in a variety of fields: natural sciences, economics, and others.
2. Solve linear equations and inequalities
3. Perform basic operations (addition, subtraction, multiplication, division, and composition) involving real numbers, exponents, and polynomials.
4. Simplify and perform operations on polynomial expressions
5. Simplify radicals and apply the laws of exponents.
6. Solve quadratic equations by factoring and by using the quadratic formula.

TEXTBOOK AND SUPPLEMENTAL MATERIALS:

Pre-Algebra & Introductory Algebra ,5th Edition

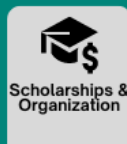
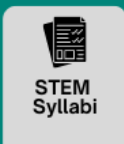
Elayn El Martin-Gay, University of New Orleans, Lakefront

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STEM STUDENT HUB

Information & Resources tailored towards students taking any STEM courses



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

Calculators are permitted to be used at any time.

GRADING POLICY:

A student who has not correctly completed at least 70% of the assigned work will not be permitted to 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 9-10)
- Test 2 (Chapters 11-12)
- Test 3 (Chapters 13-15)

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:

Homework	10%
Test 1	15%
Test 2	15%
Test 3	15%
Exit Exam	45%

SAMPLE COURSE SCHEDULE:

WEEK	SECTION	TOPICS	Book Pages
1	9	Equations, Inequalities, and Problem Solving	658
	9.1	<i>Symbols and Sets of Numbers</i>	659-667
	9.2	<i>Properties of Real Numbers</i>	668-676
	9.3	<i>Further Solving Linear Equations</i>	677-687
2	9.4	<i>Further Problem Solving</i>	688-701
	9.5	<i>Formulas and Problem Solving</i>	702-713
	9.6	<i>Linear Inequalities and Problem Solving</i>	714-736
3	10	Exponents and Polynomials	738
	10.1	<i>Exponents</i>	739-750
	10.2	<i>Negative Exponents and Scientific Notation</i>	751-760
	10.3	<i>Introduction to Polynomials</i>	761-770
4	10.4	<i>Adding and Subtracting Polynomials</i>	771-777
	10.5	<i>Multiplying Polynomials</i>	778-784
	10.6	<i>Special Products</i>	785-794
	10.7	<i>Dividing Polynomials</i>	795-801
5		EXAM 1(CHAPTERS 9-10)	
6	11	Factoring Polynomials	817
	11.1	<i>The Greatest Common Factor</i>	818-827
	11.2	<i>Factoring Trinomials of the Form $x^2 + bx + c$</i>	828-834
	11.3	<i>Factoring Trinomials of the Form $ax^2 + bx + c$</i>	835-841
7	11.4	<i>Factoring Trinomials of the Form $ax^2 + bx + c$ by Grouping</i>	842-846
	11.5	<i>Factoring Perfect Square Trinomial and the Differ. of Two Squares</i>	847-857
	11.6	<i>Solving Quadratic Equations by Factoring</i>	858-865
	11.7	<i>Quadratic Equations and Problem Solving</i>	866-874
8	12	Rational Expressions	888
	12.1	<i>Simplifying Rational Expressions</i>	889-899
	12.2	<i>Multiplying and Dividing Rational Expressions</i>	900-909
	12.3	<i>Adding and Subtracting Rational Expressions with the Same Denominator and Least Common Denominator</i>	910-917
9	12.4	<i>Adding and Subtracting Rational Expressions with Different Denominators.</i>	918-924
	12.5	<i>Solving Equations Containing Rational Expressions</i>	925-935

10		EXAM 2 (CHAPTERS 11-12)	
11	13	Graphing Equations and Inequalities	967
	13.1	<i>Reading Graphs and the Rectangular Coordinate System</i>	968-980
	13.2	<i>Graphing Linear Equations</i>	981-990
	13.3	<i>Intercepts</i>	991-1000
	13.4	<i>Slope and Rate of Change</i>	1001-1017
	13.5	<i>Equations of Lines</i>	1018-1031
12	14	Systems of Equations	1082
	14.2	<i>Solving Systems of Linear Equations by Substitution</i>	1094-1101
	14.3	<i>Solving Systems of Linear Equations by Addition</i>	1102-1109
12	15	Roots and Radicals	1136
	15.1	<i>Introduction to Radicals</i>	1137-1144
	15.2	<i>Simplifying Radicals</i>	1145-1152
	15.3	<i>Adding and Subtracting Radicals</i>	1153-1156
13		EXAM 3– (Chapters 13-15)	
14		Exit Exam Review	
15		Departmental Exit Exam	

HCCC POLICIES, STATEMENTS, AND SERVICES:

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



