SCHOOL OF STEM SYLLABUS

TERM:

INSTRUCTOR:

COURSE CODE: MAT 070/073

OFFICE HOURS:

COURSE TITLE: Basic Algebra /Workstop

OFFICE LOCATION:

DAY(S) AND TIME(S):

EMAIL:

LOCATION:

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

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

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