Syllabus: *Math 086 Pre-Algebra*

Course Information	
Course Prefix/Number: Math 086	Credit Hours: 3
Semester: Fall 2016	Course Title: Pre-Algebra
Class Days/Times: Tuesday - Thrusday 11:15 AM – 12:30 PM	Room: A-3

Instructor Information: Name: Jorge Guarin	Phone/Voice Mail: (520) 383-0101 E-mail: jguarin@tocc.edu Office location: Main Campus, Building A Office hours: To Be Determined

Course Description:
  Transition from arithmetic to algebra. It includes signed numbers, commutative, associative, and distributive laws, order or operations, algebraic expressions, polynomials, fractions, and linear equations. Also includes percents, ratio and proportion, graphing, perimeter, area, volume, and optional topics.

Course Objectives:
   During this course students will

1. Define absolute value and graph real numbers on the number line.
2. Perform operations on signed numbers and apply to practical problems.
3. Apply commutative, associative, distributive properties and order of operations to arithmetic and algebraic expressions.
4. Simplify and evaluate algebraic expressions.
5. Perform addition, subtraction, and multiplication on polynomials.
6. Simplify and perform operations on arithmetic and algebraic functions.
7. Solve linear equations including equations with decimal and fractional coefficients.
8. Translate percent problems into algebraic equations and solve.
9. Solve ratio and proportion problems.
10. Solve application problems using perimeter, area, and volume.
11. Plot points and graph linear equations on the Cartesian coordinate system.

Student Learning Outcomes (SLOs) :
   After completion of the course students will be able to
- Perform basic operations using whole numbers, fractions, decimals, ratios and proportions.
- Apply the five-step process for solving a wide variety of situational (word) problems.
- Employ technology to set up and solve real world situations.

Texts and Materials:
  Required Text: Pre-Algebra, 5th Edition, Lial, Hestwood, 2014, ISBN 13: 978-0-321-84502-3.
  Textbooks are available at the Main Bookstore. Checking out and returning an iPad is a

requirement to obtain a grade in this class. APPS: The "Free GraCalc", "My script calc" and "Google Drive" apps are recommended.

Evaluation and Grading & Assignments:

Attendance:
The attendance policy for this class is simple. You are all adults who have in some form paid for this class. If you do not wish to come to any session, you do not have to attend. However, you are still responsible for completing work on time. If you are late for class, enter quietly and sit down. You will not be allowed to make up any quiz you miss because of tardiness. In case of a valid emergency, contact the instructor using the information given on the first page. After filling out an absence form, the instructor will decide whether or not the work missed can be made up.

Academic Integrity: Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Mathematics Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure.
[*a*] All homework can be done independently or with other students. The purpose of homework is to develop critical thinking skills and also to develop specific skills related to teaching mathematics by repeated practice of these skills. Without this practice most students find it impossible to perform well in this class. No collaboration is tolerated during exams in-class exams.
[*b*] Students are expected to abide by the Student Code of Conduct and the Scholastic Code of Conduct found in the Tohono O'odham Community College Student Handbook. Copies are available at the main student bookstore.

Course Feedback:
All materials submitted will be graded and returned the next class period after they are submitted.

Homework Policy:
Homework will be assigned each class period (See Homework) and it is due at the next class period after all questions have been solved. The solutions to selected problems in the text are given in the back of the textbook. Similar problems in the book are step-by-step solved on the web site **www//interactmath.com**. Late homework will not be accepted unless the student has made an arrangement with the instructor before it is to be turned in.

Withdrawals:
Please be sure to withdraw yourself by **October 26, 2016** if you do not expect to complete the class, otherwise you may receive an "F" grade.

Workload:
Students are expected to spend an average of 18 hours per week attending class sessions, doing assignments and preparing for exams. The standard Carnegie Unit of college credit assigns one credit hour for each 15 hours of class time and assumes that students spend two hours working outside the classroom for each hour of classroom instruction. For a three-credit semester course, this translates to an average of 12 hours spent outside of class weekly for 8 weeks.

Grading System/Policies:

Your final grade will be calculated as follows:		Grading Scale	
6 homework assignments	200 points		
6 quizzes	200 points	A =	1000 - 900 points
6 tests	300 points	B =	899 - 800 points
1 project	100 points	C =	799 - 700 points
1 final exam	200 points	D =	699 – 600 points
Total possible	1,000 points	F =	less than 600 points

Incomplete (I) grade:
To receive an " I " grade, you must have finished at least 3/4 of the course requirements and specifically request the grade. Please call before the last week of class to be sure that there is sufficient time to consider your request. An incomplete grade generally implies that a student has shown sufficient initiative to complete the course on his or her own. You will receive a copy of the standard "I" form filed with the grade. This form details specifically what must be done to complete the course. A student has one year to complete the required work, after which the grade automatically reverts to an "F."

Make-up Assignments:
No make-up assignments will be given and no late assignments will be accepted unless the student has made arrangements with the instructor.

Extra Credit Opportunities: Do not ask for extra credit opportunities until you have completed all of the required assignments to date. The instructor will occasionally give extra credit homework, quiz, and exam questions that test critical thinking skills.

Final Grades: Students will receive a grade transcript from the college mailed to the address given with registration materials at the end of the semester when all grades have been recorded.

SPECIAL NOTE TO STUDENT: For privacy and security reasons, instructors are advised **NOT** to give grades over the telephone.

Course Outline:

I. Signed Numbers
  A. Number Line
  B. Absolute Value
  C. English Statements to Symbols
  D. Operations on Integers
  E. Practical Applications

II. Commutative, Associative, and Distributive Laws and Order of Operations
  A. Apply to Numeric Expressions
  B. Apply to Algebraic Expressions

III. Algebraic Expressions
  A. Simplify
    1. Distributive Property
    2. Combine Like Terms
  B. Evaluate

IV. Polynomials
  A. Terminology
  B. Add and Subtract
  C. Multiply

V. Fractions
  A. Arithmetic Operations
  B. Algebraic Fractions

VI. Linear Equations
  A. Solving Equations With One Operation
  B. Solving Equations With Two Operations
  C. Solving Equations With Decimals

D. Solving Equations With Fractions
E. Applications

VII. Percents
    A. Translate Into Algebraic Equations
    B. Solve
    C. Applications

VIII. Ratio and Proportion
    A. Notation and Interpretation
    B. Applications

IX. Graphing
    A. Cartesian Coordinate System
    B. Plot Points
    C. Graph a Linear Equation by Plotting Points

X. Perimeter, Area, and Volume
    A. Calculate Perimeter and Area of Rectangles, Circles, Parallelograms, Trapezoids, Triangles
    B. Calculate Volume of Rectangular Solids, Cylinders, Spheres and Cones
    C. Applications

XI. Optional Topics
    A. Common Factors
    B. Measurements

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.

Homework

Hw #	Quiz	Chapter	Section	Page	Numbers	Score
Hw 1		1	1.1	7	1-51 Odd #'s	
			1.2	17	1-43 Odd #'s	
			1.3	26	1-59 Odd #'s	
			1.4	32	1-53 Odd #'s	
			1.5	40	1-53 Odd #'s	
			1.6	50	1-53 Odd #'s	
			1.7	59	1-59 Odd #'s	
			1.8	73	1-59 Odd #'s	
	Q 1	1	Chapter 1 Test	89	1 - 34 ALL	
Test 1		1	1.1 - 1.8	In Class		
Hw 2		2	2.1	101	1-57 Odd #'s	
			2.2	114	1-59 Odd #'s	
			2.3	128	1-57 Odd #'s	
			2.4	138	1-57 Odd #'s	
			2.5	146	1-55 Odd #'s	
	Q 2	2	Chapter 2 Test	161	1 - 26 ALL	
Test 2		2	2.1 - 2.5	In Class		
Hw 3		3	3.1	171	1-47 Odd #'s	
			3.2	181	1-47 Odd #'s	
			3.3	192	1-45 Odd #'s	
			3.4	200	1-23 Odd #'s	
	Q 3	3	Chapter 3 Test	212	1 - 22 ALL	
Test 3		3	3.1 - 3.4	In Class		
Hw 4		4	4.1	225	1-55 Odd #'s	
			4.2	237	1-59 Odd #'s	
			4.3	249	1-59 Odd #'s	
			4.4	260	1-53 Odd #'s	
			4.5	275	1-59 Odd #'s	
			4.6	284	1-51 Odd #'s	
			4.7	293	1-37 Odd #'s	
			4.8	302	1-27 Odd #'s	
	Q 4	4	Chapter 4 Test	317	1 - 32 ALL	
Test 4		4	4.1 - 4.8	In Class		
Hw 5		5	5.1	327	1-57 Odd #'s	
			5.2	336	1-35 Odd #'s	
			5.3	344	1-59 Odd #'s	
			5.4	351	1-53 Odd #'s	
			5.5	362	1-59 Odd #'s	
			5.6	372	1-65 Odd #'s	
			5.8	387	1-45 Odd #'s	
			5.9	395	1-27 Odd #'s	
	Q 5	5	Chapter 5 Test	423	1 - 31 ALL	
Test 5		5	5.1 - 5.9	In Class		
Hw 6			6.1	433	1-35 Odd #'s	
			6.2	439	1-35 Odd #'s	
			6.3	450	1-53 Odd #'s	
			6.4	459	1-39 Odd #'s	
	Q 6	6	Chapter 6 Test	501	1 - 12 ALL	
Test 6		6	6.1 - 6.4	In Class		
Final Exam		Ch 1 - 3	Cumm Review 1-3	214	1-38 ALL	
Final Exam		Ch 1 - 6	Cumm Review 1-6	503	1-33 ALL	

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#	Day	Date	Sections	Hw Due	Test
1	Tuesday	8/16/2016	1.1 - 1.2	Pre-Qz1	
2	Thursday	8/18/2016	1.3 - 1.4	1.1-1.2	
3	Tuesday	8/23/2016	1.5 - 1.6	1.3-1.4	
4	Thursday	8/25/2016	1.7 - 1.8	1.5-1.6	
5	Tuesday	8/30/2016	Review Chap 1	1.7-1.8	
6	Thursday	9/1/2016	1.1 - 1.8	Quiz 1	Chap 1
7	Tuesday	9/6/2016	2.1 - 2.2	Pre-Qz2	
8	Thursday	9/8/2016	2.3 - 2.4	2.1-2.2	
9	Tuesday	9/13/2016	2.5 - Review Chap 2	2.3-2.5	
10	Thursday	9/15/2016	2.1 - 2.5	Quiz 2	Chap 2
11	Tuesday	9/20/2016	3.1 - 3.2	Pre-Qz3	
12	Thursday	9/22/2016	3.3 - 3.4	3.1-3.2	
13	Tuesday	9/27/2016	Review Chap 3	3.3-3.4	
14	Thursday	9/29/2016	3.1 - 3.4	Quiz 3	Chap 3
NC	Tuesday	10/4/2016	St. Francis Day - No Class		
15	Thursday	10/6/2016	4.1 - 4.2	Pre-Qz4	Chap 3
16	Tuesday	10/11/2016	4.3 - 4.4	4.1-4.2	
17	Thursday	10/13/2016	4.5 - 4.6	4.3-4.4	
18	Tuesday	10/18/2016	4.7 - 4.8	4.5-4.6	
19	Thursday	10/20/2016	Review Chap 4	4.7-4.8	
20	Tuesday	10/25/2016	4.1 - 4.7	Quiz 4	Chap 4
21	Thursday	10/27/2016	5.1 - 5.2	Pre-Qz5	Chap 4
22	Tuesday	11/1/2016	5.3 - 5.4	5.1-5.2	
23	Thursday	11/3/2016	5.5 - 5.6	5.3-5.4	
24	Tuesday	11/8/2016	5.8 - 5.9	5.5-5.6	
25	Thursday	11/10/2016	Review Chap 5	5.8-5.9	
26	Tuesday	11/15/2016	5.1 - 5.9	Quiz 5	Chap 5
27	Thursday	11/17/2016	6.1 - 6.2	Pre-Qz6	
28	Tuesday	11/22/2016	6.3 - 6.4	6.1-6.2	
NC	Thursday	11/24/2016	Thanksgiving - NO CLASS		
29	Tuesday	11/29/2016	6.5 - 6.6	6.3-6.4	
30	Thursday	12/1/2016	Review Chap 6	6.5-6.6	
31	Tuesday	12/6/2016	6.1 - 6.6	Quiz 6	Chap 6
FE	Thursday	12/8/2016	1.1 - 6.6		Final Exam

Acknowledgment of Receipt of Syllabus

Please read, sign and return the following acknowledgment to me in class, or return to me at the following address:

Jorge Guarin
Tohono O'odham Community College
P.O. Box 3129
Sells, AZ 85634

☐   I have received my MAT 086 syllabus (including course objectives, policies, requirements and schedule) and have read and understood all the enclosed materials

☐   I have no objection to receiving an occasional call from the instructor at the number given with my registration materials.

☐   I prefer that the instructor not call or contact me by phone anytime during the semester.

My reason(s) for taking this course:
_____
_____
_____

My background in this area includes:
_____
_____
_____

☐   I would like to be contacted by the instructor regarding the following concerns:
_____
_____
_____
_____

_____   _____
Print Name Clearly Here   Sign Name Here

_____   _____
Student ID Number   Telephone Number

_____   _____
Current Mailing Address/City/State/Zip   E-mail Address