

MATH K172**COLLEGE ALGEBRA****Fall 2015**

INSTRUCTOR: Joe Amarello

(860) 383-9326 - (C)

(860) 437-2940 - (W)

COURSE DESCRIPTION: This course is a thorough and rigorous algebra course, that strengthens the proficiency with algebraic skills and the conceptual understanding needed to be successful in the Calculus sequence. The topics include: sets, polynomial, exponential, logarithmic and rational functions, rational exponents, conic sections, right triangle trigonometry, matrices, polynomial, exponential, logarithmic and radical equations, linear and quadratic inequalities, absolute value equations and inequalities, linear and nonlinear systems.

PREREQUISITE: MAT* K137 or MAT* K137S with a “C” grade or better or appropriate placement through multiple-measures assessment process.

TEXTBOOK: College Algebra 4th Edition
By Beecher, Penna, Bittinger

COURSE SCHEDULE:

Sept 2 - 1.1 to 1.4	Nov 4 – 5.4 to 5.6 (Quiz 4)
Sept 9 – 1.5 to 2.3 (Quiz 1 Home)	Nov11 – Test 2
Sept 16 – No Class (Joe Day)	Nov 18 – 6.1 to 6.3
Sept 23 - 2.4 to 3.2	Nov 25 –Optional Class Night
Sept 30 – 3.3 to 3.5 (Quiz 2)	Dec 2 – 6.4 to 6.6 Quiz 5 Home)
Oct 7 – Test 1	Dec 9 – 7.1 to 7.4
Oct 14 – 4.1 to 4.3	Dec 16 – Final Exam
Oct 21 – 4.4 to 4.6 (Quiz 3 Home)	Dec 23 – Makeup/Supplemental Day
Oct 28 - 5.1 to 5.3	

OFFICE HOURS: I will be available to meet with the students at the school in the evenings as needed.

ATTENDANCE: Attendance will be taken at each class. Your attendance record will be considered for borderline grades. I look forward to seeing you at each class.

HOMEWORK: An assignment will be given at the end of each class. You are expected to have completed the assignment for the next class session. Questions on the homework will be discussed at the beginning of each class.

EXAMS: There will be two progress exams and a final exam in this course. You are required to take all exams. Any schedule conflicts should be resolved prior to exam day.

GRADES: Your grade will be determined as follows:
Two Exams - 25% each
Final Exam - 25%
Quiz Grade - 25%

COLLEGE WITHDRAWAL POLICY: As stated in college catalog

DISABILITIES AND LEARNING DIFFERENCE STATEMENT: As stated in college catalog (See me if you have any questions or concerns).

MAT 172 Course Outcomes

After the successful completion of the course the student must be able to:

1. Define Absolute Value, Find Distances on the Number Line, on the Coordinate Plane
2. Simplify Expressions with Rational Exponents, Write them in Radical Form, Simplify, Combine, Rationalize Radical Expressions
3. Solve Linear and Quadratic Inequalities, Absolute Value Equations and Inequalities, Express Answers in Interval Form
4. Perform Operations on Complex numbers, Conjugates, Represent Complex Numbers Graphically.
5. Perform Operations on Radical Expressions, Rational Exponents, Solve Radical Equations
6. Find the Domain and Range of Functions, Combine Functions, Identify Odd and Even functions, Graph Piece-wise Defined Functions, Find Compositions of Functions, Inverses, Transformations of Functions.
7. Find the Characteristics of Polynomial Functions, Solve Polynomial equations, Find Zeroes(roots) and X-intercepts of Polynomials, Apply the Fundamental Theorem of Algebra, The Remainder and Factor Theorem, Analyze End Behavior
8. Graph Rational Functions, Find Vertical, Horizontal, Slant Asymptotes
9. Graph Exponential and Logarithmic Function, Use Properties of Exponentials and Logarithms, Solve Exponential and Logarithmic Equations
10. Solve Systems of Linear Equations in Several Variables, Use Matrices, Determinants
11. Find all Characteristics of Conic Sections, Write the Equations of Circles, Parabolas, Ellipses, Hyperbolas in Standard Form, and Graph them
12. Solve Nonlinear System of Equations.
13. Apply the Right Triangle Trigonometry

Chap/Sec	Exercises	Chap/Sec	Exercises
1.1	9,17,21,23,34,43,53,61,77,79,90	4.6	1,3,5,27,29
1.2	21,35,55,59,65,82	5.1	3,5,45,47,49,77
1.3	7,25,35,43,49,55,77	5.2	1,2,3,11,15,51,53,72
1.4	7,19,23,31,41,47,59	5.3	9,11,13,27,45,53,55,57,98
1.5	19,25,29,33,43,47,57,83	5.4	1,3,9,15,17,25,31,39,47,73
2.1	5,15,17,25,33,37	5.5	1,7,11,19,31,35,41
2.2	1,7,15,21,31,41,45,47	5.6	1,5,7,9,13
2.3	1,7,13,17,21,27,41,49	6.1	17,21,31,35
2.4	None	6.2	1,3,13
2.5	1,3,7,21,31,40	6.3	7,9,27
3.1	1,3,11,15,31,35,41,51,53,71	6.4	5,9,13,21,23
3.2	1,3,7,17,21,37,51,61,63,71,81,91,99	6.5	1,2
3.3	1,5,13,19,23,41,43	6.6	1,3,9,29,31
3.4	1,5,11,15,33,37,71,83	7.1	7,9,15
3.5	1,11,21	7.2	7,11,23,25
4.1	19,21,23,51	7.3	7,11
4.2	7,9,11,15,19	7.4	7,11,17
4.3	1,3,13		
4.4	None		
4.5	1,3,17,20,21,23		