Elementary Algebra Foundations MAT K095, Tues. & Thur. 9:30 am – 11:05 am, Room D226

Instructor – Gayla D. Holmes

Pre-requisite: **TRCC Credit level MAT* K075 Minimum Grade of C or Accuplacer Elementary Algebra 40.0 or Math Placement 10**

Text: Elementary and Intermediate Algebra – 5th Edition -- Baratto - Bergman

Course description: 3 CREDIT HOURS Elementary Algebra Foundations

This developmental course prepares students for college level courses. The course develops understanding of number systems, different representations of numbers, operations on numbers, including numbers expressed in scientific notation. The course introduces functions, their graphs, modeling relationships between quantities using functions. Topics also include solving equations and expressions with integer exponents, radicals, solving, analyzing and modeling linear equations, systems of linear equations, Pythagorean Theorem and geometrical formulas are used to solve real world problems.

Measurements: Tests – 100%.
Grade equivalents: A 93 – 100, A- 90 – 93, B+ 87 -89, B 83 – 86,
B- 80 – 82, C+ 77 – 79, C 73 – 76, C- 70 – 72, D+ 67 – 69. D 63 – 66,
D- 60 – 62, F below 60, N if the student completed less than 60% of work

Attendance: It is very important that you attend **ALL** classes. Your attendance in the classroom, participation in classroom work /projects and preparation for each class is required and is essential to your success in the course.

Support Services: Tutorial services are available and **FREE** in the Learning Resources Center/Tutoring and Academic Support Center "TASC". Also schedule to meet with me for an extra help.

Office Hours: Immediately after class or by arrangement.
E-mail: gholmes@trcc.commnet.edu or gdh1222@att.net **(fastest option)**

Class Cancellation: In case of inclement weather, check the college website for class cancellations or call 860-215- 9000 for recorded message on the college phone.

Plagiarism and Academic Honesty:

At TRCC, we expect the highest standards of academic honesty. The Board of Trustees' Proscribed Conduct Policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism.

Alert System: MyCommNet Alert is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather. All students are encouraged to sign up for MyCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site (see the link below).
http://www.trcc.commnet.edu/div_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html

Disabilities : If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

TRCC Disabilities Service Providers Counseling & Advising Office Room A-119	
Matt Liscum (860) 215-9265	• Physical Disabilities • Sensory Disabilities • Medical Disabilities • Mental Health Disabilities
Chris Scarborough (860) 215-9289	• Learning Disabilities • ADD/ADHD • Autism Spectrum

Course Outline, Schedule, Homework (This is a guide only. Assignments and schedules may vary).

Section	Topics		HW
Ch.0	**Review of Prealgebra 2/11 –**		
0.1	Review of fractions	p. 10	1 - 91
0.2	Real Numbers	p. 19	1 - 69
0.3	Adding and subtracting real numbers	p. 28	1 - 73
0.4	Multiplying and dividing real numbers	p. 39	1 - 77
0.5	Exponents and Order of Operations	p. 48	1 - 75
Ch. 1	**From Arithmetic to Algebra 2/16**		
1.1	Algebraic Expressions	p. 63	1, 5, 7, 19, 21, 25, 27
1.2	Evaluating algebraic expressions	p. 75	1-21
1.3	Simplifying Algebraic Expressions	p. 87	27-67, 81-89
1.4	Solving equations using addition property	p. 102	41-61, 71 -77
1.5	Solving equations using multiplication property	p. 113	13-39, 59-63
1.6	Combining the rules to solve equations	p. 126	11-59, 73,75,85,87
1.7	Linear inequalities **Test 2/19**	p. 141	25-33, 38-55
Ch. 2	**Functions and Graphs 2/23**		
2.1	Formulas and problem solving	p. 161	1-21, 31-35
2.2	Sets and set notation	p. 175	15-27, 35-43,
2.3	Two-variable equations	p. 186	1, 7, 15, 17
2.4	The Cartesian coordinate system	p. 198	1-21, 35, 39, 51
2.5	Relations and Functions	p. 212	17-21, 33, 3741-47
2.6	Tables and graphs **Test 3/10**	p. 226	7-21, 45-49
Ch. 3	**Graphing Linear Functions 3/15**		
3.1	Graphing linear Functions	p. 256	1, 3, 7, 11, 21, 23
3.2	The Slope of a line	p. 279	7-15, 19-41, 47-51, 55, 59,
3.3	Linear equations **Test 4/5**	p. 294	1, 3, 5, 11-21, 23-31, 33-43
Ch. 4	**Systems of Linear Equations 4/7 – 4/19**		
4.1	Systems of Linear equations	p. 347	5 - 23, 25-31, 33-38
4.2	Solving systems in one variable graphically	p. 358	1-9
4.3	Solving systems in 2 Variables **Test 4/21**	p. 373	1-25, 33, 35, 51-55
Ch. 5	**Exponents and Polynomials 4/26**		
5.1	Positive Integer Exponents	p. 414	1-51
5.2	Integer Exponents and Scientific notation	p. 427	1-35, 83, 89, 91, 97, 105, 107
5.3	An introduction to Polynomials	p. 436	1 -15, 37
5.4	Adding and subtracting Polynomials	p. 444	11, 17, 23, 31, 37
5.5	Multiplying Polynomials	p. 455	1-19, 25-37, 49-53, 61-67
5.6	Dividing Polynomials **Test 5/10**	p. 465	1-19
Ch.7	**Radicals and Exponents 5/12**		
7.1	Roots, radicals, Pythagorean Theorem	p. 560	1-9, 59-63
	Final Exam 5/17		

Course Objectives and Outcomes.

At the completion of MAT095, the student will be able to do the following —

Algebra

1. Use symbols and the language of algebra
2. Identify algebraic expressions
3. Use algebra to model an application
4. Evaluate an algebraic expression
5. Use linear equations to solve problems

Functions and Graphs

1. Solve applications involving geometric figures
2. Solve motion problems
3. Use two variable equations in applications
4. Plot orders pairs
5. Determine whether a relation is a function
6. Evaluate a function
7. Determine function values from a graph

Linear Functions

1. Graph a linear equation
2. Use the intercept method to graph a linear equation
3. Write the equation of a line using the slope and the y-intercept
4. Write the equation of a line through two points
5. Construct a linear function to model an application
6. Graph a linear inequality in two variables

System of Linear Equations

1. Solve systems of equations by graphing
2. Find and interpret the intersection of two lines
3. Use the addition method to solve a system of equations
4. Use the substitute method to solve a system of equations
5. Graph and solve a system of linear inequalities

Exponents and Polynomials

1. Use exponential notation
2. Simplify exponential expressions
3. Classify, determine the degree and determine the number of terms in a polynomial
4. Add and subtract polynomials
5. Determine the product of two binomials

Radicals and Exponents

1. Evaluate expressions containing radicals
2. Apply the Pythagorean theorem
3. Use the distance formula
4. Use the product and quotient property to simplify radical expressions