Elementary and Intermediate Algebra, Fall 2015, 32295 Mat K137S, W, F 4:30pm – 5:45am, Room D210
                                                            F 6:00 pm – 6:50pm, Room D219

Instructor – AnneFay Sullivan

Prerequisite: **Elementary Algebra Foundations MAT K095 or Elementary Algebra Intensive College Readiness MAT K095I**

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

Course description: 4 CREDIT HOURS INTERMEDIATE ALGEBRA EMBEDDED

This course is Intermediate Algebra with embedded computer developmental support. The course cultivates understanding and different representations of functions. The course covers linear, quadratic, exponential, rational, radical functions, equations and expressions and operations on them with emphasis on modeling and solving real world problems.

Measurements: Each test – 15%, ALEKS - 15%, Lab attendance – 15 %, and final exam - 10%.
                        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. Meeting with me for an extra help.

Office Hours: By arrangement.
                        E-mail: asullivan@trcc.commnet.edu

Class Cancellation: In case of increment 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

Digication Statement: All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios

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

Section	Topic	Exercises
Ch. 6	**8/31/16 – 9/16/16**	
6.1	An Introduction to factoring	486/9, 13, 31, 39, 43, 59, 67, 71, 79, 82
6.2	Factoring special products	497/1, 6, 13, 23, 25, 43, 51, 53, 59, 60, 65, 69
6.3	Factoring: Trial and Error	507 & 508/17, 22, 43, 53, 54, 57
6.4	Factoring: The ac method	517 & 518/2, 15, 21, 31, 32, 38, 40, 59, 60, 78, 82
6.5	Factoring strategies	524 & 525/1, 17, 23, 31, 43, 44, 53, 59, 77, 81
6.6	Factoring and problem solving	537 - 539/5, 10, 21, 35, 45, 53, 58, 72, 90
	Test #1 9/21/16	
Ch. 7	**9/23/16 – 10/7/16**	
7.1	Roots and radicals	560 & 570/1, 9, 14, 38, 49, 50, 57, 58, 69, 72
7.2	Simplifying radical expressions	573/1, 2, 10, 26, 27, 41, 49, 71, 72
7.3	Operations on radicals	584 - 587/1, 6, 11, 20, 33, 58, 61, 67, 75, 89
7.4	Solving radical equations	593 & 594/4, 8, 9, 16, 26, 27, 40, 48
7.5	Rational exponents	603 & 604/1, 5, 6, 15, 23, 33, 46, 53, 65, 69
7.6	Complex numbers	611 & 612/1, 5, 11, 15, 27, 36, 40, 51, 55
	Test #2 10/12/16	
Ch. 8	**10/14/16 – 10/26/16**	
8.1	Solving quadratic equations	633 - 635/1, 8, 11, 22, 34, 35, 46, 55, 63, 83
8.2	The quadratic formula	651 - 653/2, 5, 8, 21, 29, 46, 55, 72, 73
8.3	An introduction to parabolas	665 - 667/1, 2, 3, 9, 14, 21, 25, 35, 45
8.4	Quadratic equations and problem solving	678 - 679/1, 3, 6, 23, 31, 35, 37
	Test #3 10/28/16	
Ch. 9	**11/4/16 – 11/16/16**	
9.1	Simplifying rational expressions	699 - 700/2, 10, 18, 25, 36, 48, 67, 74, 79
9.2	Multiplying and dividing rational expressions	710 - 711/2, 6, 11, 17, 28, 34, 37, 44
9.3	Adding and subtracting rational expressions	721 - 723/1, 11, 23, 33, 36, 43, 55, 60
9.6	Rational equations and problem solving	762 - 765/2, 3, 18, 25, 51, 61, 67, 81,
	Test #4 11/18/16	
Ch.10	**11/30/16 – 12/9/16**	
10.4	Exponential functions	819 - 821/1, 2, 3, 10, 25, 37, 51, 59
10.7	Logarithmic and exponential equations	859 - 861/1, 2, 14, 21, 31, 39, 47, 53, 57

FINAL EXAM 12/9/16

Course Objectives and Outcomes.

At the completion of MAT*137, the student will be able to do the following —

Linear Functions
1) Provide multiple representations (e.g., words, symbols, graphs, tables) of linear functions by hand and/or using technology
2) Determine identifying characteristics of linear functions
3) Model and solve real world applications with linear functions (e.g., car depreciation) and systems of linear equations

Quadratic Functions and/or Expressions
1) Provide multiple representations of quadratic functions or expressions by hand and/or using technology
2) Determine identifying characteristics of quadratic functions or expressions (e.g., factors)
3) Evaluate, simplify, and perform operations on quadratic functions or expressions
4) Solve quadratic equations algebraically (e.g., factoring, completing the square, and quadratic formula with rational solutions) and/or graphically
5) Solve real world applications involving quadratic equations and functions

Exponential Functions and/or Expressions
1) Provide multiple representations (e.g., tables, graphs, symbols) of exponential functions or expressions by hand and/or using technology
2) Determine identifying characteristics of exponential functions or expressions
3) Evaluate, simplify, and perform operations on exponential functions or expressions
4) Identify real world applications involving exponential functions and/or solve graphically

Rational Functions and/or Expressions
1) Provide multiple representations of simple rational functions or expressions by hand and/or using technology
2) Determine identifying characteristics of rational functions or expressions
3) Evaluate, simplify, and perform operations on simple rational functions or expressions
4) Solve simple rational equations algebraically and/or graphically
5) Solve real world applications involving rational functions

Radical Functions and/or Expressions
1) Provide multiple representations of simple radical functions or expressions by hand and/or using technology, with primary emphasis on square root
2) Determine identifying characteristics of radical functions or expressions
3) Evaluate, simplify, and perform operations on simple radical functions or expressions
4) Solve simple radical equations algebraically and/or graphically
5) Solve real world applications involving radical functions
6) Identify imaginary numbers

Mathematical Practices

1) Make sense of problems and persevere in solving them.
2) Reason abstractly and quantitatively.
3) Construct viable arguments and critique the reasoning of others.
4) Model with mathematics.
5) Use appropriate tools strategically.
6) Attend to precision.
7) Look for and make use of structure.
8) Look for and express regularity in repeated reasoning