### THREE RIVERS COMMUNITY COLLEGE Elementary Algebra Foundations Math 095 Fall 2017

Course Number: 30142 Section T3 TR 11:00 am – 12:15 pm, Room D126

Instructor: Henry Kopij Email: <u>hkopij@trcc.commet.edu</u> Office Hours: 12:45 – 1:45 pm D205 or by appointment

Text: Elementary & Intermediate Algebra 5th Ed., Barrato

### **Course Description**:

This developmental course prepares students for college level classes. 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 used to solve real world problems. **This course does not count towards the minimum requirement for graduation.** 

#### **Course Outcomes:**

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

- 1. Use the symbols and language of algebra to identify algebraic expressions
- 2. Use algebra to model an application
- 3. Evaluate algebraic expressions
- 4. Use a calculator to evaluate an expression and to solve applications
- 5. Simplify algebraic expressions by combining like terms and adding and subtracting expressions
- 6. Verify solutions to an equation
- 7. Use the addition and multiplication properties to solve equations and solve applications
- 8. Combine properties to solve equations and solve applications
- 9. Solve inequalities and graph their solutions
- 10. Solve a formula for a given variable and solve applications involving geometric figures

- 11. Use set builder notation, interval notation and find unions and intersections of sets
- 12. Solve two variable equations
- 13. Plot ordered pairs on Cartesian axis
- 14. Identify domain and range of a function
- 15. Determine whether a relation is a function including vertical line test
- 16. Evaluate functions and use function notation to write an equation
- 17. Read function values from a table and from a graph
- 18. Graph a linear function by plotting points and by using intercept method
- 19. Find the slope and y-intercept of a line and write the equation of a line
- 20. Determine whether lines are parallel or perpendicular
- 21. Solve a system of equations graphically and classify systems of equations
- 22. Rewrite a linear equation in one variable as f(x) = g(x)
- 23. Use the addition and substitution methods to solve a system of equations
- 24. Use exponential notation and simplify exponential expressions
- 25. Simplify expressions with zero and negative exponents and solve applications
- 26. Classify polynomials and find their degree
- 27. Add, subtract, multiply, and divide polynomials
- 28. Evaluate expressions containing radicals
- 29. Estimate radical expressions and simplify expressions containing radicals
- 30. Apply the Pythagorean Theorem and the distance formula
- 31. Write an equation of a circle and sketch its graph

#### **Required Materials:**

Three-ring notebook and tabbed dividers to create sections for class notes and homework. The homework section should be organized so that the instructor can check it periodically in order to determine a homework grade.

#### **Course Supplement**: (Optional)

**ALEKS:** This course is supplemented by a new math evaluation and tutorial program called ALEKS. You can access this program by accessing the ALEKS website at <u>www.aleks.com</u> to register. The course title is *Beginning Algebra* and the course code is **9AJ6U-X3TET**.

**Attendance:** Students who are absent 3 times will have one point added to their final grade, 2 absences will add two points, 1 or fewer will add 3 points to the final grade. A weekly quiz will be given at the beginning of class and no make-ups are allowed.

#### Grading Criteria for non MML students:

4 announced tests each worth 100 points ( 50% of grade) Weekly quizzes 10% of grade (Best 8 scores) Homework 20% of grade Final Exam worth 200 points (20% grade) **Homework:** Homework will be assigned during each class and will be gone over on the following class. Homework Assignments from the textbook (20% of grade). Assignments are listed in the syllabus. All work must be kept in a notebook with assignments clearly listed (showing all work) where they can be viewed by the instructor. All assignments must be completed on time.

**Exams**: Will be administered in class. No make-up exams will be allowed unless there is an unavoidable situation that can be documented. A student must contact the instructor on the day of the exam or earlier in order to be allowed to take a make up exam. If a student misses an exam the final exam grade will be used as a replacement for missed exam. Any subsequent missed tests will result in a zero.

**Extra Credit** – No "extra credit" is given in this course.

**Support Services**: Free tutoring is available in room C-117 at the Thames Tutoring Center (860-885-2311). Appointments are required in advance.

Cell Phones and Beepers: Cell phones and beepers should be off during class.

**Inclement Weather:** You can check for delays or cancellations by going to <u>www.trcc.commnet.edu</u> or by calling 860 886-0177.

**CLASS PARTICIPATION**: I strongly encourage everyone to participate in class and to ask any questions that you may have.

## **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.

**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.

<b>TRCC Disabilities Service Providers</b> Counseling & Advising Office Room A-119			
<b>Matt Liscum</b> (860) 383-5240	<ul> <li>Physical Disabilities</li> <li>Sensory Disabilities</li> <li>Medical Disabilities</li> <li>Mental Health Disabilities</li> </ul>		
<b>Chris Scarborough</b> (860) 892-5751	<ul> <li>Learning Disabilities</li> <li>ADD/ADHD</li> <li>Autism Spectrum</li> </ul>		
GOOD LUCK			

# Math 095 Beginning Algebra

<b>Chapter</b> 0	Section 0.1 0.2 0.3 0.4	Assignment 10/1-91 19/1-61 28/1-71 39/1-71	<b>Date</b> 8/29 8/31
1	$\begin{array}{c} 0.5 \\ 1.1 \\ 1.2 \\ 1.3 \\ 1.4 \\ 1.5 \\ 1.6 \\ 1.7 \end{array}$	48/1-87 63/3-78 mult of 3 75/1-75 mult of 3 87/5-100 mult of 5 102/29-61 112/1-39, 59-63 126/1-51, 71-77 141/3-75 mult of 3	9/4
	Exam 1		
2	2.1 2.2 2.3 2.4 2.5 2.6	160/1-23, 35-41 175/3-75 mult of 3 186/ 5,7,9,15,17,19,27,29 196/1-37 211/3-11, 17-29, 33-37, 4 226/1-49	,31 9-63
	Exam 2		
3	3.1 3.2 3.3	256/3-36 mult of 3 279/3-57 mult of 3 294/5-40 1,5,7, 11-45	
	Exam 3		
4	4.1 4.2 4.3	347/11-31, 33-38 all 358/1-9, 17 373/1-29, 39, 53, 65	
	Exam 4		

# Text: <u>Elementary & Intermediate Algebra 5<sup>th</sup> ed.</u> Barrato

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5.1	414/1-61
5.2	427/3-75 mult of 3, 83-97, 103
5.3	436/1-35
5.4	444/3-51 mult of 3
5.5	455/5-85 mult of 5
5.6	465/1-31

# Exam 5

7.1 $560/3-45$ mult of 3, 59-6
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# **Final Exam**

Jan 22 Jan 27	0.1-0.2 0.3-0.5	0.1 0.2-0.4
Jan 29 Feb 3	1.1 1.2	0.5-1.1 1.2-1.3
Feb 10 Feb 12 Feb 17	1.3 1.4 1.5	1.4-1.6 1/6-1.7 2.1
Feb 19 Feb 24	1.6 1.7	T1 2.2-2.3
Feb 26 Mar 3	2.1 T1	2.4 2.5-2.6
Mar 5	2.1	3.1
Mar 10	2.2	T2
Mar 12	2.3	3.2
Mar 24	2.4	3.3
Mar 26	2.5	4.1
Mar 31	2.6	T3
Apr 2	3.1	4.2
Apr 7	T2	4.3
Apr 9	3.2	5.1
Apr 14	3.3	T4
Apr 16	4.1	5.2
Apr 21	T3	5.3
Apr 23	4.2	5.4
Apr 28	4.3	5.5
Apr 30	5.1	5.6
May 5	T4	7.1
May 7	5.2	T5
May 12	5.3	Review
May 14		Final