

Elementary Algebra, SPRING 2016, CRN 12856 Mat K095I , MWF 8:00am – 8:50am, lab 9:00-9:50 Rm D219

Instructor – John Donato

Pre-requisite: MAT K075 or MAT K075I

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

Course description: 6 CREDIT HOURS ELEMENTARY ALGEBRA

This course is Elementary Algebra taught as a lecture course and with Aleks as a lab. In the first hour the course develops procedures for creating equations that abstractly represents the relations of relevant data in real world problems and how to solve equations. It exposes students to the geometric relation of equations to a physical model(Cartesian plane) and introduces polynomial equations. The lab section exposes students to additional practice and individualized instruction using the Aleks software.

Measurements: Grade will be determined by taking 85% of test average including the Aleks grade(final is a double test) and 15% of homework avg

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: Immediately after class or by arrangement.

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Phone: (401) 330-0170 cell

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 | <ul style="list-style-type: none"> • Physical Disabilities • Sensory Disabilities • Medical Disabilities • Mental Health Disabilities |
| Chris Scarborough (860) 215-9289 | <ul style="list-style-type: none"> • 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

095 Course Topics Elementary and Intermediate Algebra by Baratto, Bergman 5th ed

| Section | Topics | HW (odd numbered problems; it's a guide only) | |
|----------------|---|--|--------|
| Ch.0 | Review of Prealgebra (primarily for 095 I classes) | | |
| 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

| | | | |
|-----|---|--------|-------------------------|
| 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 | p. 141 | 25-33,38-55 |

Ch. 2

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|-----|---------------------------------|--------|--------------------|
| 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 | p. 226 | 7-21, 45-49 |

Ch. 3

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|-----|---------------------------|--------|-----------------------------|
| 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 | p. 294 | 1,3,5,11-21, 23-31, 33-43 |

Ch. 4

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|-----|---|--------|----------------------|
| 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 | p. 373 | 1-25, 33,35, 51-55 |

Ch. 5

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|-----|---|--------|-------------------------------|
| 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 | p. 465 | 1-19 |

Ch.7

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|-----|--------------------------------------|--------|------------|
| 7.1 | Roots, radicals, Pythagorean Theorem | p. 560 | 1-9, 59-63 |
|-----|--------------------------------------|--------|------------|

MAT095 Course Outcomes

1. Evaluate algebraic expressions
2. Determining if a given number is a solution to an equation or an inequality
3. Determining if an ordered pair is a solution to a linear equation in 2 variables
4. Add, subtract, multiply, and divide real numbers and raise a real number to an integer power
5. Add, subtract, multiply, and divide Polynomials
6. Simplify, add, subtract, multiply, and divide Radicals
7. Rules for Exponents
8. Converting between Scientific Notation and standard notation
9. Order of Operations (manipulation)
10. Properties of Real Numbers (manipulation)
11. Simplifying Algebraic Expressions (manipulation)
12. Graphing in a Rectangular Coordinate System
13. Graphing Linear Equations by plotting points, using intercepts, and using the Slope-Intercept form
14. Graphing the solution to a Linear Inequality in one variable.
15. Graphing a System of Linear Equations in two variables
16. Rates of change (slopes)
17. Identifying Linear Equations (Linearity)
18. Solving Linear Inequalities in one variable
19. Finding the Equation of a Line (manipulation)
20. Solving Linear Equations in one variable
21. Solving formulas for a specified variable
22. Solving a System of Linear Equations in two variables (two methods)
23. Solving equations with degree 2 or greater by factoring
24. Two forms for the equation of a line (transforming back and forth)
25. Finding an unknown number word problem
26. Solving consecutive numbers (including odd and even) word problems
27. Solving dimension problems using geometric formulas
28. Solving Percent and Mixture problems
29. Solving table problems such as rate, time, and distance
30. Solving linear inequality problems
31. Solving linear equation in two variables problems
32. Solving System of 2 linear equations in 2 variables word problems
33. Identifying Polynomial degree
34. Adding and subtracting polynomials
35. Multiplying and dividing polynomials

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