



**MAT 095I, ELEMENTARY ALGEBRA (embedded), Spring 2018, 12856**  
**MW 9:30am-10:45am and 11-12:15pm room D219**  
**Elizabeth Allen**

4 quizzes	25 points each	100
ALEKS	see below	100
Assignments		300
Final exam	100 points	100

Final grade = (total points earned/800) \*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, UF if the student completed less than 60% of work.

**ALEKS:**

In this course, students will use an online educational program titled ALEKS 360 (Assessment and LEarning in Knowledge Spaces). This program can be used on any computer with Internet access. An access code for ALEKS 360 is required and may be purchased at the bookstore or online at [www.aleks.com](http://www.aleks.com). In ALEKS students are expected to complete six (6) Intermediate Objectives. Completion of each Intermediate Objective by its specified due date is worth a total of 100 points (15 points per Intermediate Objective and 10 for overall mastery). Check the calendar in ALEKS for all Intermediate Objective due dates. Also, you are required to keep a notebook for your ALEKS work only – that is separate from notes taken in class. In this notebook you should label the topic you are working on and do the problems by hand while you are working on the problems. This will allow me and the tutor to see where you are having problems. This notebook will be checked and graded at the instructor's discretion. This will be included in your assignment's grade.

**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. If for some reason, I need to cancel class I will post an announcement in Blackboard. You should set up your school email so that it will forward to your personal email and you can receive these notifications in a timely manner.

**MyCommNet Alert:** **MyCommNet** 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.

**Plagiarism and Academic**

**Honesty:**

Academic integrity is essential in all aspects of college coursework and learning. I have zero tolerance for academic dishonesty. It is expected that **YOU** complete all your assigned ALEKS work. Communication or collaboration of ANY sort is **ABSOLUTELY PROHIBITED** during any exam. Academic Misconduct is punishable in a number of ways, including a score of a zero on the assignment where the cheating took place, a grade of an F in the course and/or possible censure on your permanent record. All cases of academic dishonesty will be referred to the Academic Dean. Do not let yourself come under the suspicion of academic dishonesty.)

**Disabilities:**

Students with learning disabilities should contact the Learning Specialist, Matt Liscum, at 860-215-9265 or via email at [mliscum@trcc.commnet.edu](mailto:mliscum@trcc.commnet.edu) as soon as

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possible to ensure timely accommodations. Students with physical disabilities should contact Elizabeth Willcox at 860-215-9289 or via email at [ewillcox@trcc.commnet.edu](mailto:ewillcox@trcc.commnet.edu) to facilitate accommodations. All testing accommodations **MUST** be discussed with the instructor in a timely manner, that is, *at least* one to two class meetings **prior** to any scheduled test for which accommodations are needed.

**Digication:** All students are required to maintain an online learning portfolio in Digication that uses the college template.

**BOARD OF REGENTS FOR HIGHTER EDUCATION AND CONNECTICUT STATE COLLEGES AND UNIVERSITIES POLICY REGARDING SEXUAL MISCONDUCT REPORTING, SUPPORT SERVICES AND PROCESSES POLICY**

**Statement of Policy for Public Act No. 14-11: An Act Concerning Sexual Assault, Stalking and Intimate Partner Violence on Campus:**

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in education programs and activities in federally funded schools at all levels. If any part of a school district or college receives any Federal funds for any purpose, all of the operations of the district or college are covered by Title IX.

Title IX protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination, including discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. All students (as well as other persons) at recipient institutions are protected by Title IX – regardless of their sex, sexual orientation, gender identity, part-or full-time status, disability, race, or national origin-in all aspects of a recipient’s educational programs and activities.”

If any student experiences sexual misconduct or harassment, and/or racial or ethnic discrimination on Three Rivers Community College Campus, or fears for their safety from a threat while on campus, please contact Vicki Baker, the Diversity Officer and Title IX Coordinator: 860-215-9208 ([vbaker@trcc.commnet.edu](mailto:vbaker@trcc.commnet.edu))

**Acceptance Policy:**

After reading this syllabus, choosing to stay registered for this course exemplifies your acceptance of the syllabus and all policies and consequences outlined in the syllabus. If you do not agree with any of the terms in the syllabus, you are free to withdraw.

**Class Expectations:**

The expectation is that you are spending 2-3 hours of reading and doing homework for this class for every “academic” hour we meet in class. We meet 6 “academic” hours per week, therefore you should expect to spend **at least 12 - 18 hours per week** on this class, outside of class meetings, every week!

**Disclaimer:** The instructor has the right to change/modify this syllabus at any time with proper notification to the class.

**COURSE OUTCOMES:**

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- 1. Rational Numbers – At the end of this course, a student should be able to**
  - a) Identify and distinguish between rational and irrational numbers
  - b) Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g.,  $\pi^2$ ,  $\sqrt{8}$ )
  
- 2. Expressions and Equations with Polynomials, Rational and Radical Expressions, and Integer Exponents – At the end of this course, a student should be able to**
  - a) Interpret parts of an expression, such as terms, factors, and coefficients and evaluate expressions for a given replacement value(s)
  - b) Add, subtract, and multiply polynomials. Divide polynomials by a monomial
  - c) Construct and interpret equations as two expressions set equal to each other
  - d) Manipulate formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's Law  $V = IR$  to highlight resistance  $R$
  - e) Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example,  $3^2 \times 3^{-5} = 3^{-3} = \frac{1}{3^3} = \frac{1}{27}$
  - f) Use square root symbols to represent solutions to equations of the form  $x^2 = p$ , where  $p$  is a positive rational number
  - g) Evaluate square roots of perfect squares
  - h) Know that numbers such as  $\sqrt{2}$  are irrational
  - i) Express very large or very small quantities in scientific notation
  - j) Perform operations with numbers expressed in scientific notation
  
- 3. Linear Equations in One Variable – At the end of this course, a student should be able to**
  - a) Solve linear equations and inequalities in one variable
  - b) Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms
  - c) Create linear equations and inequalities in one variable and use them to solve real world applications
  - d) Recognize examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions
  
- 4. Linear Equations in Two Variables – At the end of this course, a student should be able to**
  - a) Interpret the rate and unit rate as the slope of the graph
  - b) Derive the equation  $y = mx + b$  for a line intercepting the vertical axis at  $b$  and having a slope of  $m$
  - c) Identify parallel and perpendicular lines based on their slopes

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- d) Graph a linear equation in two variables
- e) Construct a linear equation to model a linear relationship between two quantities. Determine and interpret the rate of change and initial value from a description of a relationship or from two  $(x, y)$  values, including reading these from a table or graph
- f) Construct linear equations given a graph, a description of a relationship, or two input-output pairs (include reading these from a table) using point-slope form and slope-intercept form

**5. Systems of Linear Equations – At the end of this course, a student should be able to**

- a) Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs
- b) Solve systems of two linear equations in two variables algebraically (using both substitution and addition methods), graphically (by hand and/or technology), Solve simple cases by inspection. *For example,  $3x + 2y = 5$  and  $3x + 2y = 6$  have no solution because  $3x + 2y$  cannot simultaneously be 5 and 6*
- c) Recognize systems of linear equations with one solution, infinitely many solutions, or no solutions
- d) Solve real-world problems leading to two linear equations in two variables

**6. Functions – At the end of this course, a student should be able to**

- a) Understand that a function is a rule that assigns to each input exactly one output and that the graph of a function is the set of ordered pairs consisting of an input and the corresponding output
- b) Interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line
- c) Use functions to model linear relationships between quantities
- d) Use function notation. Evaluate functions for inputs in their domains
- e) Graph linear functions and show intercepts
- f) Recognize that linear functions have a constant rate of change and interpret the rate of change in the context of the problem

**7. Applications – At the end of this course, a student should be able to**

- a) Apply geometric formulas for two and three-dimensional figures such as rectangles, circles, rectangular solids, cylinders, spheres, etc.
- b) Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two dimensions

Text: *Elementary and Intermediate Algebra, 5<sup>th</sup> ed.* by Baratto & Bergman