ASE Reading/Writing in the Content Areas V

Adult Basic and Secondary Education

Elgin Community College

Fall 2020

ASE Math V   **AMT 050.???**

Instructor:

Phone:

ECC Email:

Class Schedule (Days/Times)**:** Class will meet regularly via Zoom at _days/times_____. Meeting links will be provided in D2L

Class Location: Students will study remotely via D2L and Zoom. We will not be meeting on campus.

Credit Hours:

Office Hours/Location: Office hours will be via Zoom at: _days/times_____.

All union instructors are expected to have online (Zoom) office hours.

Important Dates (First/Last day of class, holidays, etc.)**:**

Prerequisite: Appropriate adult education placement test score. No U.S high school diploma or U.S. high school equivalency certificate.

Students will need reliable access to a device and internet or wifi to successfully participate in this course.

Description:

Math V: A math course emphasizing algebraic expressions, equations, polynomials, inequalities and functions. The course content also includes, geometry including properties of angles, slopes, circles and volume as well as, the basics of statistics and probability.

Career awareness will also be explored.

Text/Materials Used: D2L, Zoom, **www.ck12.org**, www.i-pathways.org

I-Pathways and GED Official Practice Tests will be used.

Course Content Outcomes:

Math V:

A. Use properties of rational and irrational numbers including rational exponents

B. Write algebraic expressions and equations to solve problems

C. Solve systems of equations

D. Graph equations and inequalities

E. Analyze and build functions between two quantities

F. Solve linear and exponential equations

G. Apply properties of angles to show congruency in triangles

H. Determine the slope of a line given its various forms

I. Apply geometric theorems

J. Solve complex problems involving area, surface area, and volume of cylinders, cones and spheres (e.g., composites)

K. Find probabilities of compound events

L. Make inferences and justify conclusions of statistical data

Course Outline:

Math V:

1. Number and Quantity
    a. Rational Exponents
    b. Rational and Irrational Numbers
2. Algebra
    a. Create and solve equations
    b. Equations & Inequalities-graphically
3. Functions
    a. Interpreting & Building
    b. Linear & Exponential Models
4. Geometry
    a. Congruence
    b. Similarity, Right Triangles, & Trigonometry
      c. Geometric Theorems
      d. Volume
      f. Slope
      f. Perpendicular and Parallel Lines
5. Statistics & Probability
    a. Probability Models

       b. Analyzing Statistical Data

Methods of Instruction: Direct instruction, cooperative learning, computer-based learning

Course Requirements:

- Log into D2L a minimum of three times a week to stay active and involved in the course.

- Attend regular synchronous sessions via Zoom and participate in discussions and activities.
- Do assigned readings and complete assignments.
- Be an active learner. Ask questions when you have them.
- Remember you are a part of a community of learners. Reach out to others and make connections. This is an important part of distance learning.

Synchronous Learning:

We will be meeting twice each week via Zoom. I will be looking forward to seeing all of you. Please be on time and treat this time as if you were attending class on campus. Find a quiet spot to attend meetings. Share this schedule with your family, and if you can, have a responsible adult in your household watch children so you won't be interrupted when we meet. If you are unable to attend a meeting, please communicate this with me as soon as you can.

Things to have on hand during synchronous meetings:

- Your device
- Device charger
- Headphones or earbuds, if you need them
- Notebook and a pen or pencil

Asynchronous Learning:

Asynchronous learning is a little bit more flexible. This will also require a quiet space, and it's a good idea to plan a regular time to do this. Let your family know that you will need quiet time to complete your assignments. Many students make time after work or after putting kids to bed to work on their class homework.

Measures of Student Performance: Students will earn credit (CR) or no credit (NC). A grade of credit in this class is earned by making a level gain on the TABE, meeting the course objectives, or instructor recommendation.

Attendance Policy: Regular attendance is expected and important to your success. If you miss the first 3 classes, you are automatically withdrawn from the course. If you miss 3 classes in a row, you will be withdrawn from the course. Please contact your instructor if you are absent. If you must drop the class, please speak to your instructor and then notify the front desk by calling 847-214-6904.

Classroom Behavior: Students are expected to conduct themselves in a respectful, responsible, orderly, civil manner by showing respect for one another, the instructor, and the virtual classroom environment. Any behavior that interferes with the learning environment and disrupts the learning experience of others is prohibited. All students are expected to comply with the Student Code of Conduct and all other college procedures as stated in the current College Catalog.

Disability Services: Elgin Community College (ECC) views disability as an important aspect of diversity and is committed to providing an equitable and accessible learning environment for all students. The Student Disabilities Services (SDS) office collaborates with students who have disabilities to provide and arrange reasonable accommodations to foster full participation in courses and campus experiences.

If you have a disability (e.g., vision, hearing, speech, psychological, ADHD, TBI, health, intellectual, autism, learning, physical, etc.), please visit www.elgin.edu/ada, complete the "Registration Form" under "New to Student Disabilities Services," gather documentation on your disability, and schedule an intake appointment.

If you have received accommodations in the past at ECC and need accommodation letters for your courses this semester, please visit www.elgin.edu/ada and complete the "Request Form" under "Returning Student" as soon as possible.

While ECC will not compromise or waive essential skill requirements in any course or degree, students with disabilities may be supported with reasonable accommodations to help meet these requirements. The laws state that students do not need to disclose a disability, but if reasonable accommodations are needed, the students must disclose a disability to the SDS office and provide documentation on the disability during the intake appointment. If students do not follow the intake process through the SDS office, ECC does not need to provide reasonable accommodations to standard procedures. If you have any questions, please contact sds@elgin.edu or 847-214-7717.

Class Schedule (Instructor reserves the right to make adjustments to the schedule as necessary)**:**

	TOPIC
Module 0	Introductions and trainings on relevant technology
Module 1	Number and Quantity
Submodule 1/ Part 1	- Simplifying numerical expressions - Oder of operations - Absolute value
Submodule 2/ Part 2	- Extend the properties of exponents to rational exponents - Use properties of rational and irrational numbers
Module 2	Functions
Submodule 1/Part 1	Interpreting Functions Analyze functions using different representations Building Functions (

	• Build a function that models a relationship between two quantities
Submodule 2/Part 2	Linear, Quadratic, and Exponential Models • Construct and compare linear, quadratic, and exponential models and solve problems
Module 3	Algebra
Submodule 1/part 1	Seeing Structure in Expressions • Interpret the structure of expressions • Write expressions in equivalent forms to solve problems Inequalities • Solve equations and inequalities in one variable • Solve applications of linear equations and inequalities Rearrange formulas to solve for a quantity of interest, using the same reasoning as in solving equations
Submodule 2/Part 2	Creating Equations • Create equations that describe numbers or relationships Reasoning with Equations and Inequalities • Understand solving equations as a process of reasoning and explain the reasoning
Submodule 3/part 3	Solve equations and inequalities in one variable • Solve systems of equations • Represent and solve equations and inequalities graphically • Solve quadratic equations in one variable
Module 4	Geometry
Submodule 1/Part 1	• Students apply their knowledge of angles sum, and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. • Understand and apply Pythagorean theorem

	• Apply the Pythagorean Theorem to find the distance between two points in a coordinate system
Submodule 2/Part2	• Solve real-world and mathematical problems involving area, surface area, and volume
Module 5	Statistics and Probability (This module may be covered based on availability of time/number of classes)
Submodule 1/Part 1	• Summarize, represent, and interpret data on a single count or measurement variable • Summarize, represent, and interpret data on two categorical and quantitative variables • Interpret linear models
Submodule 2/Part 2	• Making Inferences and Justifying Conclusions • Using Probability to Make Decisions