Community College of Aurora
Go Beyond the Book

MAT-055
Algebraic Literacy
School year 2017-18

Mon-Fri
2nd, 3rd & 5th Period
ACHS Rm. 303

INSTRUCTOR INFORMATION

Dr. Susan Holloway

Phone: 303-340-1600X 47049
Office: ACHS Room 303
Office Hours: Tues/Wed after school by appointment only
Email: swholloway@aps.k12.co.us
Best way to contact me: Email

COURSE INFORMATION

General Information

Course and Section Number: MAT 055
Day(s): **Mon-Fri**
Times: **2nd, 3rd, 5th period**
Room: **ACHS 303**

Course Description

Develops algebraic skills necessary for manipulating expressions and solving equations. Topics in the course include radicals, complex numbers, polynomials, factoring, rational expressions, quadratic equations, absolute value equations and inequalities, systems of linear equations, related applications, and math learning strategies. This course prepares students for College Algebra and Finite Math.

Course Prerequisite(s)

Placement in this course can be done through one of the following
Accuplacer Placement Exam: Elementary Algebra (EA) score of 60-84
Successful Completion of:
(S/A, S/B, or S/C)
- Mat 090
- Mat 050

Subsequent Courses

This course is designed to prepare students who earn an S/A, S/B, or S/C for the following course.

Mat 121 – College Algebra

Note: Always check with an advisor to determine which course will meet your degree requirement.

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Important Dates

Date Course Begins: **08/08/2017**
Date Course Ends: **12/20/2018**
Last Date to Drop With a Refund: **Sept 8, 2017**
Last Date to Withdraw ("W" Grade, No Refund) :   **Nov 27, 2017**
Days where class does not meet: Check ACHS calendar.

Course Materials

Textbook: Intermediate Algebra 10th edition
Author: Lial, Margaret | Hornsby, John | McGinnis, Terry
ISBN: 9780321872180
D2L: This course has a companion site called Desire2Learn. On this site, you will find the course syllabus, grades, attendance records, and additional course handouts. You may access D2L through the CCA website www.ccaurora.edu by clicking on the MyCCA icon as well as the website cca.desire2learn.com.
Additional Materials: Graphing Calculator; Provided by ACHS to use in the classroom.

COURSE POLICIES

Attendance

Every student must follow APS attendance policy. Attendance is important. Records will be kept of attendance. Part of your grade will be based upon attendance.

Make-Up Work

Take care of missing work ASAP. Take advantage of afterschool tutoring. For any make up work (if your instructor is providing any), please see me during the office hour.

Grading/Evaluation

Grading and evaluation is based on the policy and procedures set by the Community College of Aurora.

Grade	Points
A	90 - 100%
B	80 - 89%
C	70 -79%
D	60-69%

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F	Below 60%

Classwork/Homework Assignments   20% of grade
Quiz   15% of grade
Participation   05% of grade
Exams (timed)   60% of grade

Course Conduct	It is expected that each person be mindful and respectful of others' learning environment. Keep our classroom as conducive to learning as possible.

HOW TO BE SUCCESSFUL IN THIS CLASS

How to Come to Class Prepared	1. Don't miss class. 2. If you do have to arrive late, get started as soon as possible. 3. Read the corresponding material before class. 4. Bring book, paper, and pencil.
What to Expect During Class	You class will be based on the course calendar. High engagement, and rigor are key features of your class.
What to Do After Class	Make sure you work on the homework of the section on the same day. Don't wait for the due date to approach, this will put you in risk of falling.
How You Can Use D2L	See you counselor to get you login information for D2L. This is the official site for your course.
What to Do if You Miss Class	If you are missing a class, quiz or test you may be allowed to complete the task during the office hour (if informed in advance or if you come with a proper document that shows you are in an emergency situation)
Where You Can Get Help Outside Class	How I can help you: I'm here before and after school most days to help you understand the material. How you can help yourself: Stay current with all assignments. Allot yourself enough time each day to study math. For most people, that is a minimum of an hour per day. How your classmates can help you: Find others in class to partner and practice math problems. Exchange emails.

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Math Tutoring Lab: CCA provides a significant amount of free drop-in tutoring, including hours on Fridays and Saturdays. Library tutoring: ACHS Library tutoring: TBD

TENTATIVE SCHEDULE

Will be provided separately in class

COLLEGE WIDE POLICIES

General Learning Outcomes	The Instructional Unit has identified the following lifelong/workplace skills that are the foundation for your course of study at CCA: Communication, Critical Inquiry, Intra/Interpersonal Responsibility, Quantitative Reasoning, Technology, and Aesthetic Perception. Of these skills, this course will focus on Communication, Critical Inquiry, Intra/Interpersonal Responsibility, Quantitative Reasoning and Technology. Successful students will have shown through in-class exercises and specific course assignments the ability to pursue and retain knowledge, comprehend the various significant levels of acquired knowledge (analyzing and identifying their various components), evaluate the significance of the knowledge, synthesize ideas from multiple sources, and apply what is learned to work and life situations.
Site Emergency	The Fire exits and emergency procedures will be discussed during class. When the fire alarm sounds, all students are expected to exit the building immediately. Since the security of items left behind is not guaranteed, students should gather all personal belongings before proceeding to the nearest exit.
Accommodations	Parents/guardians have the right to refer their child for evaluation for possible Special Education services. Counseling will evaluate students to determine if accommodations are needed and will then inform teachers of all accommodations. .

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Academic Dishonesty Policy	**INSTRUCTIONAL POLICY ON ACADEMIC DISHONESTY:** Academic dishonesty includes cheating and plagiarism. Cheating is the unauthorized use of assistance with intent to deceive an instructor or any other individual responsible for evaluating a student's work. Note the following examples:

- Submission of any materials not prepared by students but presented as their own.
- The unauthorized possession and/or use of notes, books, calculators/ cell phones or the soliciting of assistance from another student during an examination.
- Illegitimate possession or disposition of examination or test materials and/or answer keys to tests and examinations.

Plagiarism refers to the use of another person's work without giving proper credit to that person. A student must give proper credit through the use of appropriate citation format when (a) copying verbatim another person's work (i.e., words, phrases, sentences, or entire passages); (b) paraphrasing another person's work (i.e., borrowing but rewording that person's facts, opinions, or ideas); and (c) summarizing another's work (i.e., use of one's own words to condense longer passages into a sentence or two).

CONSEQUENCES OF ACADEMIC DISHONESTY:
When dishonesty is evident, the following minimum sanctions will be applied:
First offense: The student will receive an "F" or "Zero" as the grade for the assignment. In addition, the first incident may result in the loss of testing privileges in the Learning Resource Center for the current and next semester in which the student is enrolled in the college.
Second offense: The student may receive an "F" for the course and may be expelled from the class. A second offense may also result in permanent loss of testing privileges in the Learning Resource Center.
Third offense: The student may receive an "F" for the course and may be expelled from the college.

COLORADO COMMUNITY COLLEGE SYSTEM COURSE REQUIREMENTS

Standard Competencies	As part of the Colorado Community College System, the Community College of Aurora is required to cover the competencies according to system policy. The competencies listed below will not exactly match with the schedule or textbook for this particular course.

1. Demonstrate knowledge of and the ability to perform algebraic manipulations with radicals, complex numbers, polynomials, and rational expressions.

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2. Demonstrate knowledge of and the ability to solve quadratic equations, absolute value equations and inequalities, and systems of linear equations.
3. Demonstrate the use of critical thinking skills to solve application problems.

Topical Outline	As part of the Colorado Community College System, the Community College of Aurora is required to cover the competencies according to system policy. The competencies listed below will not exactly match with the schedule or textbook for this particular course.

I. Demonstrate knowledge of and the ability to perform algebraic manipulations with radicals, complex numbers, polynomials, and rational expressions.
   a. Write a radical expression in simplest form.
   b. Find the domain for radical expressions.
   c. Write radical expressions as an expression with a rational exponent and vice versa.
   d. Apply the properties of exponents to expressions with rational exponents
   e. Simplify radical expressions using rational exponents.
   f. Add, subtract, multiply and divide radical expressions using radical properties and/or rational exponents.
   g. Rationalize denominators.
   h. Determine the square roots of a negative number and simplify powers of i.
   i. Add, subtract, multiply and divide complex numbers in the form a+bi.
   j. Determine the domain of rational expressions.
   k. Add, subtract, multiply, and divide rational expressions.
   l. Divide polynomials by binomials using long division.
   m. Factor out the greatest common monomial factor.
   n. Factor the difference of two squares.
   o. Factor trinomials of the form $ax^2 + bx + c$.

II. Demonstrate knowledge of and the ability to solve quadratic equations, absolute value equations and inequalities, and systems of linear equations.
   a. Apply the zero product property when factoring to solve quadratic equations.
   b. Solve quadratic equations by using the square root property, completing the square, and using the quadratic formula.
   c. Use the discriminant to determine the types of solutions of a quadratic equation.

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    d. Solve equations that are reducible to quadratic equations.
    e. Graph basic quadratic functions.
    f. Solve radical equations with one radical expression that simplify to linear equations. (Example: $\sqrt{3x-7}=5$)
    g. Solve rational equations that simplify to linear equations. (Example: $(x+5)/(x-2)=5$, $((x+1)(x-2))/((x-2))=5$)
    h. Solve absolute value equations and inequalities that contain one absolute value expression.
    i. Review linear equations in two variables.
    j. Determine whether a system of equations is dependent, inconsistent or consistent.
    k. Solve 2 by 2 linear system of equations by substitution elimination (addition), and graphing.

III. Demonstrate the use of critical thinking skills to solve application problems.
    a. Model real-world application problems, interpret results, and summarize using complete sentences.
    b. Create and use graphs, tables, and equations to solve real-world application problems relating to quadratic equations and systems of equations.
    c. Identify academic support resources.
    d. Engage in appropriate math learning and testing strategies
    e. Effectively use calculators and other appropriate technology.