### Elements of Algebra # GJ

**Time:** 12:30–2:15 PM  
**Room:** 1012

**Prof. Laurea Long**  
Office: 831 (this semester only)  
Office Hours: These will be posted, as well as you may schedule an appointment.

**Email:** llong@ccc.edu  
**Website:** [http://faculty.ccc.edu/llong](http://faculty.ccc.edu/llong)

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**Required Materials:**
- Paper: Graphing & “Clean-Edge” binder paper for homework
- Pencils  
  - (Do not use pens on homework or exams, unless told to)
- Be organized and write legibly.

**Recommended Items:**
- Email-address.
- Online resources, Practice quizzes (see link on back cover of textbook) and Study Study-guide.
- Read ahead & write down questions, have & use a notebook.

**Academic Standards/Dishonesty**

> “Students are expected to behave in a manner appropriate to a place of study and learning… Students must maintain Academic Standards established by the District. Failure to meet Academic Standards and changes in Academic Status may affect financial aid eligibility…. Plagiarism and cheating of any kind are serious violations of these standards and will result, minimally, in the grade of “F” by the instructor”

Any student who cheats, attempts to cheat, or is suspected of cheating (as determined by the instructor) during a quiz/exam or any attempt to copy reports/labs will receive a grade of zero for that assignment and possibly receive an F for the course and be reported to the administration.

http://hwashington.ccc.edu/main.asp?section=cat&navpage=astand  
http://projects.ccc.edu/studentpolicies/studentpolicy.pdf (downloadable PDF file)

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**Final Grades:**

Grades will not be posted nor emailed. You may bring a self-addressed-stamped envelope to the Final, or wait until the grades become available from Admissions and Records.

**Grading**

This is a rough breakdown of what might be assigned: Chapter Exams; Class-work; Textbook Homework Assignments; Daily Quizzes and Final Exam(s).

- You are required to take the final exam. Those who do not will receive an automatic F for the course.
- Be NEAT… If I can’t read it, I won’t grade it. Show ALL WORK in pencil.
- You need to be able to show how you reached your solutions for credit.

**Testing:**

- There will be Chapter Tests: each will cover 1 or 2 chapter each.
- Daily Quizzes, sometimes two Do not show up late and lose quiz points...
- Final Exams (~ 30% of grade):
  1. Comprehensive final, covering in class material.
  2. District wide exam
- There will be no make-up tests/quizzes. Your lowest 1-quiz & 1-test, will be dropped.
- Late students will not get extra time and will not be able to makeup missed quizzes.
- Same rule applies to those students who leave early, when quiz is given towards the end of class.

**Book Assignments:**

- Daily textbook assignments will be made (usually all odd problems,) Students are responsible for the completion of all assigned problems. Problems will be collected daily.
- Assignments must be in pencil, neatly done and well organized.
- In order to get credit: Write the problem, show your work and express the final answer in a clear, precise manner. (Any questions? Ask first!)

**Class-work**

- You should read ahead, so you know what to expect during class-time...The more informed you are coming into the classroom; the better the lesson, the questions, student input, and the learning!!!
- Student input is encouraged throughout all classroom presentations and problem solving, with courtesy and respect given to instructor and other students! Students are invited to ask and answer questions during the lecture as well as to work collaboratively in-class, during appropriate times... Ideally, there is maximum student participation in each class period.

**Extra Points Available**

- Online quizzes: to be emailed to instructor once completed & graded.
- Extra Written Reports with a Class presentation of results.
- Internet Projects available.

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**Calculators**

- You need to be able to show how you reached your solutions for credit. Therefore calculators will not be used... you need to learn not to rely on your calculator for your answers. You will not be able to use them on quizzes, exams nor on the finals.
Accommodated testing for students with disabilities

All students who have been authorized for academic adjustments/ accommodations for examinations/tests/quizzes should submit the proper authorizations forms within the first two weeks of the course.

Attendance:

- Attendance is a requirement of Harold Washington College. “Students are required to attend class. Non-failure to attend class may result in being a withdrawal from class or failing the course… Faculty may consider excessive absenteeism or tardiness in the evaluation”
- You must attend class every day in order to be success in this course. It is also important for you to be on time. Attendance will be taken at least once each meeting. It is also important for you to be on time and not leave early. (Therefore schedule personal appointments well outside of class-time with sufficient time for travel.)
- Report all absences by notifying the Instructor and/or Department Secretary by email, voicemail, or in writing, prior to the class. (1)
- In the event that you must miss class, it is your responsibility to find out what you have missed, not the instructor. Keep a list of phone numbers of other class-members that you may call and get the daily assignment. It is your responsibility to officially withdraw from the course. A student with excessive absences may be dropped from the course.
- If due to an emergency your instructor is twenty minutes late and no one has notified you otherwise, students are excused. HOWEVER, remain in class until this time; and send a student to notify the Dept. Make sure to sign in prior to leaving. Then you may leave with no penalty for absence for that class meeting, as long as you did sign-in!

Note:

(1) “Emergency” cases will be discussed on a case-to-case basis.
(2) No tape recorders, audible beepers, or telephones are permitted in class. You may be asked to leave class if a phone does go off AND you will have points deducted!! So turn your cell phones OFF. Cell-phones may also be confiscated & given to the Vice-President.
(3) No student solution manuals are permitted in class.

Other Online Resources:
- www.math.com
- http://math.college.hmco.com/students (EC online quizzes!!)
Objectives (Not limited to the list below.) After completing this course, you should be able to:

(Chapter 1)
- Order relations using inequality signs
- Add, subtract, multiply and divide real numbers
- Solve application problems involving real numbers
- Convert between rational numbers, decimals and percentages
- Simplify and rewrite exponential expressions.
- Solve problems using the order of operations.

(Chapter 2)
- Evaluate variable expressions
- Identify the properties of the real numbers
- Simplify variable expressions using the properties of addition & multiplication.
- Simplify variable expressions using the distributive property
- Simplify general variable expressions.
- Translate a verbal expression into a variable expression
- Translate a verbal expression into a variable expression and then simplify the resulting expression, including word application problems

(Chapter 3)
- Determine whether a given number is a solution of an equation
- Solve equations of the form $x + a = b$
- Solve equations of the form $ax = b$
- Solve application problems involving uniform motion
- Solve application problems of percent
- Solve equations of the form $ax + b = c$
- Solve equations of the form $ax + b = cx + d$
- Solve variable equations containing parentheses.
- Solving application problems for general equations.
- Solve inequalities using the Addition Property of Inequalities
- Solve inequalities using the Multiplication Property of Inequalities
- Solve general inequalities.

(Chapter 4)
- Translate a sentence into an equation and solve.
- Translate an application problem into an equation and solve.
- Solve coin and stamp problems.
- Solve problems involving perimeter.
- Solve problems involving angles formed by intersecting lines.
- Solve problems involving the angles of a triangle.
- Solve markup and discount problems, including find cost from original price & discount. Or markup.
- Solve mixture problems, such as: diverse investment, value & percent mixture.
- Solve uniform motion problems involving more than one object.

(Chapter 7)
- Add polynomials
- Subtract polynomials
- Multiply monomials
- Simplify powers of monomials
- Multiply a polynomial by a monomial
- Multiply two polynomials
- Multiply two binomials.
- Multiply binomials that have special products.
- Solving application problems involving polynomials.
- Use scientific notation.
- Divide a polynomial by a monomial
- Divide polynomials

(Chapter 8)
- Factor a monomial from a polynomial.
- Factor by grouping
- Factor trinomials of the form $x^2 + bx + c$
- Factor trinomials of the form $ax^2 + bx + c$ using trial factors
- Factor trinomials of the form $ax^2 + bx + c$ by grouping
- Factoring the difference of two squares and perfect-square trinomials.
- Factoring completely.
- Solve equations by factoring
- Solving application problems using factoring of polynomials.

(Chapter 9)
- Simplify rational expressions
- Multiply rational expressions
- Divide rational expressions
- Find the least common multiple of two or more polynomials
- Express two fractions in terms of the LCM of their denominators
- Add and subtract rational expressions with the same denominator
- Add and subtract rational expressions with different denominators
- Simplify complex fractions
- Solve equations containing fractions
- Solve proportions
- Solving application problems of proportions
- Solve problems involving similar triangles
- Solve a literal equation for one of the variables
- Solve application problems involving work & uniform motion using rational expressions.

Note from the instructor:
Student input is encouraged throughout all classroom presentations, i.e., students are invited to ask and answer questions during the lecture as well as to work collaboratively on in-class or out-of-class group projects. Ideally, there is maximum student participation in each class period. Get into a study group with fellow students early in the semester, whether you think you will need it or not.

If you find yourself getting frustrated or worried, come talk to me, or a counselor right away!!! Students who take advantage of office hours usually wind up doing well in the course, but I can’t help you unless you come discuss your concerns with me! At some point in the future you may find that you need an instructor recommendation for a scholarship, college application letter, etc., and instructor contact during the semester gives me a chance to get to know you as a person.