

Algebra 2

Chris Blackburn, Room H-12, (541)790-5191, blackburn@4j.lane.edu

Office Hours: T, F 7:45-8:30 am

Classroom communication: <https://blogs.4j.lane.edu/churchillstandingclassroom/>

Prerequisites: C- or better in Geometry A and Geometry B.

Course Description: Topics include a selective review of exponents, polynomials, and graphs of linear equations from Algebra 1 and then include rational expressions, functions and function notation, inequalities, radical expressions, quadratic equations and their graphs, an introduction to exponential and logarithmic functions, and problem solving methods. Students will have the option to earn 5 college credit through Lane Community College's College Now program. This course is equivalent to Math 95 - Intermediate Algebra. It is not recommended for students planning to take College Now Precalculus.

Course Objectives: In order to successfully complete this course, the student should have demonstrated the ability to:

1. Use prerequisite concepts and skills of the arithmetic of real numbers.
2. Manipulate and evaluate expressions involving exponents, and use scientific notation.
3. Simplify expressions involving polynomials, including factoring.
4. Simplify and perform operations involving rational expressions.
5. Solve equations involving rational expressions.
6. Solve application problems leading to equations involving rational expressions.
7. Use function notation and distinguish between input and output.
8. Write the equation of a line and graph lines on a rectangular coordinate system.
9. Solve linear equations and apply linear equations to application problems.
10. Solve and graph a linear inequality, and use interval notation.
11. Simplify and perform operations involving radical expressions.
12. Solve equations involving radical expressions.
13. Solve application problems leading to equations involving rational expressions.
14. Write the square root of a negative number in terms of i , and operate with complex numbers.
15. Solve quadratic equations by taking square roots, by completing the square, and by the quadratic formula.
16. Given a quadratic function find its vertex, axis of symmetry, and intercepts, and graph the parabola.
17. Model and solve application problems involving quadratic equations and functions.
18. Evaluate an exponential function.
19. Translate between equivalent exponential and logarithmic notations.
20. Model and solve application problems involving exponential and logarithmic equations.

Required Materials:

- a. Required Text: *Introductory and Intermediate Algebra*, 3rd edition, Blitzer
- b. A programmable graphing calculator: TI 83 Plus or TI 84 Plus is recommended. TI 83s will work.
- c. A spiral notebook or binder to organize lesson notes, classwork, and homework.
- d. Pencils or pens.

Class Format

Most classes will begin with a warmup. The warmups will be turned in on Fridays with your other work. If you are absent ask your classmates what the warmup was and complete it. During warmup time,

attendance will be taken. After the warmup, we will go over homework questions, then proceed to new material. There will be quizzes or in-class assignments on some days instead of new material.

Tests and Quizzes

On the last day of every week we will have either a test or a quiz. You will be allowed to use notes on most of the quizzes but not on the tests.

Classwork and Homework

Homework and class work are extremely important parts of your learning. Math is a very interactive discipline where practice is vital to your understanding. You will turn in these assignments every Friday (or last day of the week). When time is given in class to work on class work or homework you are expected to be working on it. This means you will be working on Algebra 2 and no other subject. Since my class is Algebra 2 you will lose credit for the assignment given if you are working on another subject's work.

Late Work

Homework and class work will be collected on the last day of each week. If you are absent on that day you will turn it in the first day you get back. If you are absent during the week you need to request an extension from me. Otherwise you will turn in your assignments on the last day of the week. Late work will be accepted within one week of the due date for half credit. If you miss a test or quiz you have one week from your return to make it up. Otherwise you will receive 25% reduced credit for every week beyond the first week of your return.

Grading

You will be assigned a letter grade on your transcript based on the following breakdown: 60% of your grade will be based on tests, 20% on quizzes, and 20% on homework and other assignments.

Attendance Policy

By district policy, I am required to submit attendance online within the first ten minutes of class. If you come to class after the ten minutes are up, you will be marked very late.

Electronics Policy

Cell phones and other electronic devices (besides calculators) are a distraction to your learning. There is a bin on each table. Shut your phone off when you get to class and put it in that bin so it is not a temptation to look at.

Getting Help

1. I am available for office hours before school on Tuesday and Friday for extra help from 7:45-8:30.
2. Consult with classmates and form study groups – math doesn't have to be a solitary struggle.
3. Get help from a free or paid tutor.
4. Consult my website for lesson notes and videos.

Si necesita más información en Español sobre esta clase, por favor comuníquese con María Ladona al 541-790-5151 o por correo electrónico schaad_ma@4j.lane.edu.