

Algebra II
Course Syllabus
Mr. Roby
Room B-130

Course Description

Students will build new mathematical knowledge through problem solving, reasoning, and communicating. They will enhance their ability to make connections between mathematical topics and related technical areas. Students will represent and communicate problem scenarios using mathematical symbols. The emphasis of the Algebra II course will include a study of linear and non-linear equations and inequalities, matrices, polynomials, and radical expressions. The students will also study systems of equations with two variables, conic sections, and logarithmic functions. The topics covered in Algebra II are complex. Therefore, students that wish to be successful in Algebra II, should have completed an Algebra I and Geometry.

Instructional Philosophy

Students will learn mathematical concepts by analyzing scenarios related to probable situations. Lessons will include purposeful problem scenarios that realize the usefulness of a specific skill. Various technological advances and modern strategies will be used to broaden the learning adventure. Students will be expected to work on assignments and projects in groups and alone. They will need to meet challenging expectations on assignments while working both in and out of class. Assessments will include tests, quizzes, homework, and projects.

Course Goals

1. Use numbers fluently and represent numbers as they relate to problem scenarios by way of algebraic symbols.
2. Understand patterns, relations, and functions and interpret each as a table or graph.
3. Communicate mathematics by reading, writing, and symbolizing problems, explanations, and solutions.
4. Become familiar with spreadsheet software and graphing calculators as alternative methods for problem solving.
5. Develop critical thinking skills that enhance the ability to problem solve and reason; particularly in mathematics.

Course Assignments

The content of the course will be organized by specific chapter and each chapter will include the assessments described below. Additionally, at the end of each semester the students will be evaluated with cumulative exams commonly referred to as the midterm and final.

Homework: Each chapter will include multiple homework assignments. Each homework assignment will be handed in on the final day of the week and graded based upon completion only. Point values for each homework assignment will range from 3 to 5 points per assignment. Late assignments will be accepted, but will be awarded a lesser point value.

Quizzes: Quizzes will be given often throughout each chapter to evaluate the progress of each student. They will be worth 5 to 20 points and generally conducted in class. On occasion, quizzes will be taken home or done in groups.

Projects: Each chapter covers a broad mathematical topic and within each chapter, students will be asked to complete at least one project. Projects may include written presentations, oral presentations, research, or group work. They will be worth 20 to 50 points. Late projects will **not** be accepted.

Graded Homework: Graded homework will be given at the end of each chapter. The graded assignment, or chapter review, will be worth 20 to 30 points. Other graded assignments may be given if the teacher feels more evaluation is needed. Students will be notified in advance if homework is going to be graded.

Test: At the end of each chapter, there will be a test comprised of extended response questions, problem scenarios, and common exercises. The test will be worth 100 points.

Grading Procedures

<u>TCTC Scale</u>	<u>Chapter Grading Plan(estimated)</u>		
92 – 100 A	Homework	25	10%
83 – 91 B	Quizzes	50	20%
74 – 82 C	Projects	50	20%
66 – 73 D	Graded Hwk	25	10%
0 – 65 F	Chapter Test	100	40%