Clawson High School



**Algebra 11**

**Course Syllabus**

**2016-2017**

Instructor: Mrs. Zasadny

Classroom: 219

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Class Hour:

**CLAWSON HIGH SCHOOL’S MISSION: The cooperative mission of Clawson High School is to encourage growth in students as independent learners who understand the importance of a well-rounded education.**

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**COURSE OVERVIEW**

Welcome to Algebra II! In Algebra II, students will build on the knowledge and skills for mathematics in Kindergarten-Grade 8 and Algebra I. Students will broaden their knowledge of quadratic functions, exponential functions, and systems of equations. Students will study logarithmic, square root, cubic, cube root, absolute value, rational functions, and their related equations. Students will connect functions to their inverses and associated equations and solutions in both mathematical and real-world situations. In addition, students will extend their knowledge of data analysis and numeric and algebraic methods. Our work in this course will help you understand how all fields of mathematics are intertwined and how they depend on each other. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. I am committed to working with you to help you understand algebra II and discover its beauty.

**COURSE CONTENT**

* Searching for Patterns
* Quadratic Functions
* Polynomial Functions
* Polynomial Expressions and Equations
* Polynomial Models
* Sequences and Series
* Rational Functions
* Solving Rational Equations
* Radical Functions
* Graphing Exponential and Logarithmic Functions
* Exponential and Logarithmic Equations
* Modeling with Functions
* Trigonometric Functions
* Trigonometric Equations
* Interpreting Data in Normal Distributions
* Making Inferences and Justifying Conclusions

**COURSE OBJECTIVES**

1. Introduce students to the different concepts and topics related to algebra II.
2. Help students understand the value of algebra II in acquiring knowledge and making decisions in today’s society.
3. Help students become critical and thoughtful consumers of information.

# TEXT (S) AND HIGHLY RECOMMEND SUPPLIES

You will need to bring the following materials with you to class each day:

1. Pencils, erasers, and marking RED pen
2. Loose-leaf paper and binder (Class Notebook)
3. 5 dividers
4. Graphing calculator
5. Colored pencils/ Highlighters

**Course Policies**

Absences/Makeup Work: When you return from an absence, you are responsible for the following:

• Turning in any homework that was due the day(s) of your absence.

• Reading the textbook section or other material that was used as a resource during

 your absence.

• Getting the homework assignment(s) you missed and updating your class notebook.

• Turning in your make-up work.

According to school policy, you have as many days as you were absent to turn in missed

assignments. However, you should turn in at least one make-up assignment as well as the

current assignment each day until you are caught up. If you are absent only on a test day, a note from your parents will be required, and you will be expected to make up the test on the day you return to class. If you are absent any more days, you will have as many days as you were absent to make up the test. Make-up tests must be taken outside of regular class time.

**Class Participation**:

At times we will all be algebra II teachers; therefore, be willing to share your ideas with others and to support your reasoning to help each other understand new ways to solve problems. In other words, participate fully in all class activities. Be “on the court” playing the game, not “in the stands” watching what is going on. Special Projects: We will be using projects to explore extended problems that are relevant to us and have real-world connections. For every project I assign, I will provide a scoring rubric that identifies and explains the important components of each project.

**Classroom Rules/Expectations:**

• Be responsible for your work. Bring supplies and homework every day.

• Be in your assigned seat ready to work when the tardy bell rings.

• Seek additional help immediately if a topic seems difficult or requires alternative

 approaches to assist in your understanding.

**No personal electronic devices allowed.) IT WILL BE TAKEN AWAY BY THE TEACHER. No food or beverages allowed.**

**Homework Policy**:

Homework will be assigned almost every school day (including over

weekends) in order to allow you to explore and practice what you are learning.

**Most homework has one or more of the following purposes:**

• Practice reinforces the learning of material already presented in class and helps you

 master specific skills.

• Preparation provides supporting information—history, skills, definitions—for

 what’s forthcoming; it will help when new material is covered in class.

• Extension or elaboration involves the transfer of previously learned skills to new

 situations.

• Integration asks you to apply skills and concepts to produce a single product.

I will make every effort to communicate the purpose of homework assignments to you.

Unless otherwise specified, homework will be due the following school day at the beginning of the period.

**For All Homework:**

• Show all calculations and work, even if you do it in your head or on a calculator.

• Explain your reasoning at the conclusion of each solved problem.

• When you get stuck on a problem, solve it as far as you can, then write a short

 explanation of your difficulty.

• Review the textbook discussion of new topics prior to beginning any homework assignment.

• Use your class notebook as a resource.

• Late assignments will be accepted, but a penalty will be incurred.

• No homework or make-up work will be accepted after a test day.

In addition, be proactive about creating study groups, using outside resources such as

dictionaries and websites, and discussing problems with each other and with me: any and all of these can help you understand the concepts we will be studying more thoroughly.

**Grading Policy**

Grade Distribution: Quarter grades will be calculated as follows: **50%** will be determined by tests and projects**, 30%** by quizzes, **10%** by assignments/binder**,** and **10%** by investigations/projects. **Semester Exam:** Students cannot retake the end of semester exam. The semester exam counts toward **20%** of the final grade and each marking period counts toward **40%** of the final grade.

**Types of Assessments**: Tests will be given every 2–3 weeks. Quizzes will be given every 3–4 days. If you have an unexcused absence before a quiz day you are expected to take the quiz the following day. Projects will be assigned throughout the course. For all assignments, I will provide a rubric or explain the expectations. Several projects will be assigned throughout the course of the year.

**Progress Reports**: You will be told of your progress and will be given a partial grade every 2–3 weeks.

**Course Procedures**

Class Binder: You will be required to keep a binder containing definitions,

explanations, and examples given in class; paperwork; investigations and other long-term

projects. Your notebook will be turned in for a grade. It should be clearly organized, and each section labeled clearly. For example:

\*Warm-up

• Notes

• Homework (in chronological order)

• Investigations and Projects

**Clawson Grading Scale:** (Appropriate rounding will be made)

**A 93% - 100% B- 80% - 82% D+ 68% - 69%**

**A- 90% - 92% C+ 78% - 79% D 63% - 67%**

**B+ 88% - 89% C 73% - 77% D- 60% - 62%**

**B 83% - 87% C- 70% - 72% E 0% - 59%**

***IMPORTANT: Parents can track their student’s grade on MISTAR. Instructions for MISTAR , including parent username and password,*** are mailed with school information at the beginning of the school year. If you have any questions please ask.

**Signature(s):**

Discuss this course syllabus with your parent(s) or guardian(s).

Please sign and return to me by (insert date:\_\_\_\_\_\_\_\_). I am looking forward

to working with you this year.

I, ( Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ), have read, understand, and accept the Algebra I course syllabus and the course expectations.

I, (Parent/Guardian Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_), have read, understand, and accept the Algebra I course syllabus and the course expectations.

**Personal Statement**

If you are having difficulties with any of the topics covered in this course, see me as soon as possible. Times when I am available for extra help are included below. In addition, keep the following thoughts in mind:

• When you worry, “I can’t do it,” tell yourself, “I can do it, and I just need to figure it out.”

• You can always ask for help.

• Set goals every week and recognize your accomplishments.

• Bring a positive attitude and a smile to class.

**Additional Information**

Extra Help: Get extra help when you need it. I will be happy to arrange extra help sessions for anyone who requests it.

School telephone number: 248-655-4200

Best time to call: -Before & after school by appointment, during prep hour by appointment

-Email checked multiple times daily (quickest response time)

-Voicemail checked daily

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