Sharyland High School

Department of Mathematics

Instructor's Information:

Instructor Name:	*Miss Edith Lerma*
Office Location:	*SHS - 421*
Telephone #:	*956-580-5300 Ext 1432*
Conference:	*M-F (11:56-12:26 pm)*

Tutorials:
Tues/Thurs
7:30am-8:00am
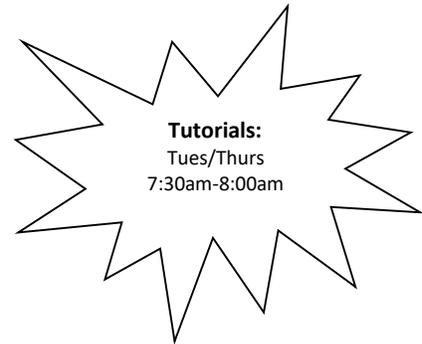
Course Information:

Course Name:	*Algebra II*
Room Location:	*SHS - 421*

Course Description:

This course is designed to teach students to be successful mathematical problem solvers. It is a continuation of algebraic and geometric concepts developed in Algebra I and Geometry. Topics covered will be the properties and attributes of functions (linear, quadratic, square root, rational, exponential, logarithmic, and cubic functions) and the multiple representations of all functions mentioned above.

Course Objective:

Students will interpret attributes of functions and their inverses. Students will solve systems of equations and inequalities. They will learn properties and apply matrices to systems of equations. Students will evaluate the effectiveness of various methods used to solve quadratic and square root equations and inequalities. Students will apply exponential and logarithmic equations to real life application problems. Students will explore attributes and transformations of cubic, cube root, and rational equations.

Evaluation:

Major Assignments……………………………60%
Minor Assignments…………..……….....…40%

Major Assignments consist of…………………Exams, Reports, Research Papers, Projects/Presentations, Essays, etc.
Minor Assignments consist of………..……….Daily Classwork/Practices, Homework, Quizzes, Lab Work, Binder/Notebook Checks, etc.
See District Grading Procedures

- ❖ All exams are timed and are in-class closed-book exams!
- ❖ Exam results will be given within one week from the exam day.
- ❖ Use of cell phones, cell phone calculators, iPod or electronics is not allowed during exam or class time. (BYOD is a privilege, not a right!)

Required Material:
Algebra II Notebook
College Ruled Notebook Paper
Pencils (Mechanical) – No pen allowed on any assignments!
Block Eraser
…any other material needed throughout the year
***homework will be sent home and graphing calculator may be needed

Free TI Graphing Calculator for Androids

App: Wabbitemu
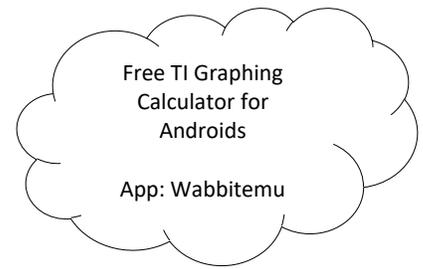
These items will be used on a daily basis and are necessary for success in the classroom. The student needs to be responsible for arriving to class prepared to learn and work. Points will be deducted from that day's assignment if student arrives unprepared.

Classroom Rules

- ➢ NO EDIBLES OR DRINK in the classroom
- ➢ PROFANITY will NOT be TOLERATED
- ➢ PARTICIPATION is not an option
- ➢ No doing homework for other classes
- ➢ RESPECT yourself and others

Tardiness and Attendance

There will be independent, partner and group activities throughout the school year. So, the presence of each student is necessary. Students need to be in class on time, otherwise students will lose out on important information and an education. If absent, the student is responsible for picking up his/her missed assignment(s), attain notes and complete assignment(s).

Cheating or Copying

Cheating will ABSOLUTELY NOT be tolerated. At any time you are caught cheating by ANY TEACHER, an automatic ZERO will be given for that assignment WITHOUT the opportunity to make up the grade. Consider this your WARNING. Cheating will result in a PARENT-TEACHER conference if necessary.

Please be aware that you will be required to use the internet and other computer software's for some of the class assignments and/or activities. If you don't have computer access at home, feel free to stop by before or after school to the library. (Hours: M-R 7:30am-4:30pm, F 7:30am-4pm).

Tutorial

I will be available as much as possible to help you be successful in this course. This includes before school and after school. I expect to see notes on the topic you need help with before approaching me for assistance. Take advantage of this time. If you do not understand something in class, I am more than happy to try to explain in another way. Please ask before it is too late!

Homework

Homework will be assigned daily. Failure to corporate by turning in an assignment on the due date will result in *a zero*!

Pearson Texas Algebra II

Students are asked to come to the board and present problems, discuss different techniques and answer questions from instructor and other students. The term project will address all the Exemplary Education Objective for the math core components.

Algebra II
Course Outline

Chapter 1	SECTIONS
Functions	1.1 Relations and Functions 1.2 Attributes of Functions 1.3 Function Operations and Composition 1.4 Inverse Functions
Chapter2	**SECTIONS**
Absolute Value Equations & Functions	2.1 Absolute Value Equations 2.2 Solving Absolute Value Inequalities 2.3 Attributes of Absolute Value Functions 2.4 Transformations of Absolute Value Functions 2.5 Graphing Absolute Value Inequalities
Chapter 3	**SECTIONS**
Systems of Linear Equations	3.1 Solving Systems Using Tables and Graphs 3.2 Solving Systems Algebraically 3.3 Systems of Inequalities 3.4 Linear Programming 3.5 Systems in Three Variables 3.6 Solving Systems Using Matrices
Chapter 4	**SECTIONS**
Matrices	4.1 Adding and Subtracting Matrices 4.2 Matrix Multiplication 4.3 Determinants and Inverses 4.4 Systems and Matrices
Chapter 5	**SECTIONS**
Quadratic Functions & Equations	5.1 Attributes and Transformations of Quadratic Functions 5.2 Standard Form of a Quadratic Function 5.3 Modeling with Quadratic Functions 5.4 Focus and Directrix of a Parabola 5.5 Factoring Quadratic Expressions 5.6 Quadratic Equations 5.7 Completing the Square 5.8 The Quadratic Formula 5.9 Complex Numbers 5.10 Quadratic Inequalities 5.11 Systems of Linear and Quadratic Equations
Chapter 6	**SECTIONS**
Square Root Functions & Equations	6.1 Square Root Functions as Inverses 6.2 Attributes of Square Root Functions 6.3 Transformations of Square Root Functions 6.4 Introduction to Square Root Equations 6.5 Solving Square Root Equations
Chapter 7	**SECTIONS**
Exponential & Logarithmic Functions & Equations	7.1 Attributes of Exponential Functions 7.2 Transformations of Exponential Functions 7.3 Attributes and Transformations of $f(x) = e^x$ 7.4 Exponential Models in Recursive Form

	7.5 Attributes of Logarithmic Functions
	7.6 Properties of Logarithms
	7.7 Transformations of Logarithmic Functions
	7.8 Attributes and Transformations of the Natural Logarithm Function
	7.9 Exponential and Logarithmic Equations
	7.10 Natural Logarithms
Chapter 8	**SECTIONS**
Polynomials	8.1 Attributes of Polynomial Functions
	8.2 Adding, Subtracting, and Multiplying Polynomials
	8.3 Polynomials, Linear Factors, and Zeros
	8.4 Solving Polynomial Equations
	8.5 Dividing Polynomials
	8.6 Theorems About Roots of Polynomial Equations
	8.7 The Fundamental Theorem of Algebra
Chapter 9	**.SECTIONS**
Radical Expressions	9.1 Roots and Radical Expressions
	9.2 Multiplying and Dividing Radical Expressions
	9.3 Binomial Radical Expressions
	9.4 Rational Expressions
Chapter 10	**SECTIONS**
Cubic & Cube Root Functions & Equations	10.1 Attributes and Transformations of Cubic Functions
	10.2 Attributes of Cube Root Functions
	10.3 Transformations of Cube Root Functions
	10.4 Cube Root Equations
Chapter 11	**SECTIONS**
Relational Functions & Equations	11.1 Inverse Variation
	11.2 Transformations of Reciprocal Functions
	11.3 Asymptotes of Rational Functions
	11.4 Rational Expressions
	11.5 Adding and Subtracting Rational Expressions
	11.6 Solving Rational Equations

As parent/guardian and student in Miss Lerma's class, we have read and understood the course syllabus and the expectations set in her class. ***(Please print clearly and return to Miss Lerma at the beginning of the next class meeting.)***

_____   _____
Parent/Guardian Name (Print)   Student Name (Print)

_____   _____
Parent/Guardian Signature   Student Signature

_____   _____
Parent/Guardian E-mail   Student E-mail

_____   _____
Parent/Guardian Phone Number   Today's Date

Please note any other information that is relevant to your child's success in this course.

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