Algebra II Syllabus

Teacher – Mrs. Leath Room W23
Chester County High School

Course Description

Algebra II starts with a continuation of concepts studied in Algebra I. Students will be challenged by new concepts that require graphing skill, function analysis, solving higher order equations, investigating complex number systems, and working with matrices, conic sections, logarithms, data analysis and probability.

Course Rationale

Algebra II is for students who wish to prepare for further mathematics such as Math Analysis/Trigonometry, College Algebra, Discrete Mathematics I and II, AP Statistics, and Calculus. Students who are planning to continue their education after high school should take this course. Students will be involved in communicating information mathematically, solving problems from a real world context and justifying the solutions to problems.

A**. Grading Policy**:

90-100%	A
80-89%	B
70-79%	C
60-79%	D
0-59%	F

B. **Grade may be determined by**:
(1) Alg II Tennessee Standards Assessments & Assignments
(2) Tn Ready Algebra II EOC Test

Assignments will be made daily. Students are expected to complete all assignments, notes, and corrections. When available, extra class time will be used to work on math assignments.

Each assignment should be:
-completed
-neat and well organized
-properly headed (name, period, and date)
-an example of the student's understanding of the assignment by **SHOWING ALL WORK!!!!!**
-cheating is not acceptable and the student's parents/guardians, assistant principal, and counselor will be notified.

C. **Class Materials**: Each student is to bring the following items to class.
- loose leaf paper
- pencil with eraser
- dry erase markers
- highlighters

- notebook*
- graph paper
- calculator (a graphing calculator would be very helpful but not necessary)

*A binder is recommended for this class. The notebook will be very helpful when reviewing for test, the final exam and future math classes. Students are encouraged to use a one inch three-ring binder.

ATTENDANCE
Attendance in class is VERY important since mathematics is cumulative. When absent from class it is the student's responsibility to obtain assignments, notes, make up tests, etc., to keep up with the rest of the class. Please check google classroom for daily agendas and the make-up work folder for copies of the activities.

APPROVED ACTIVITY ABSENCES – Excused student activities are scheduled in advance, therefore it will be the student's responsibility to turn in assignments and make up tests. A student should inform the teacher before the absence to make the necessary arrangements.

CONDUCT
Students are responsible for their own learning and behavior. Students must not interfere with another student's right to learn.
Students are expected to treat classmates and the teacher with respect at all times. **NO RUDE BEHAVIOR** will be tolerated.
Students are expected to participate. Participation will include such factors as attendance, punctuality to class, student preparation, class notes, cooperative attitude and contribution to the class' learning environment.
Students are expected to begin working promptly on assigned bell work.
Students are expected to stay alert and on task.
Students are expected to use class time to work on MATH when time is given in class.
Cell phone use is by teacher permission only. **This classroom is a no phone zone. All phones will be placed in the phone zone and not be used in class unless the teacher has granted permission. Earbuds are also not allowed unless the teacher grants permission.**

NO FOOD OR DRINKS IN CLASS (Clear water is acceptable).

If a student cannot follow the rules of conduct: Step 1-teacher & student discuss the inappropriate behavior and the student will write a self-referral; Step 2- Teacher will call parent/guardian; Step 3-Teacher will write a referral to send to the assistant principal.

Late or Missing Work
No late work is accepted. Check google classroom for missing work.

Major Instructional Goals
The intent is to explore, investigate and understand the importance of mathematics through real-world experiences. In mathematics, students will acquire the knowledge and skills to problem solve, communicate, reason, create models and make connections. In order to receive credit for this class, students will need to master the following standards. A detailed list of the standards is available at https://www.tn.gov/content/dam/tn/education/standards/math/stds_math.pdf

Algebra II emphasizes polynomial, rational and exponential expressions, equations, and functions. This course also introduces students to the complex number system, basic trigonometric functions, and foundational statistics skills such as interpretation of data and making statistical inferences. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

The major work of Algebra II is from the following domains and clusters:

The Real Number System
o Extend the properties of exponents to rational exponents.

Seeing Structure in Expressions
o Interpret the structure of expressions.
o Use expressions in equivalent forms to solve problems.

Arithmetic with Polynomials and Rational Expressions
o Understand the relationship between zeros and factors of polynomials.

Reasoning with Equations and Inequalities
o Understand solving equations as a process of reasoning and explain the reasoning.
o Represent and solve equations graphically.

Interpreting Functions
o Interpret functions that arise in applications in terms of the context.
Building Functions
o Build a function that models a relationship between two quantities.
Making Inferences and Justifying Conclusions
o Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Supporting work is from the following domains and clusters:

Quantities
o Reason quantitatively and use units to solve problems.

The Complex Number System

o Perform arithmetic operations with complex numbers.
o Use complex numbers in quadratic equations.

Arithmetic with Polynomials and Rational Expressions
o Use polynomial identities to solve problems.
o Rewrite rational expressions.

Creating Equations
o Create equations that describe numbers or relationships.

Reasoning with Equations and Inequalities
o Solve equations and inequalities in one variable.
o Solve systems of equations.

Interpreting Functions
o Analyze functions using different representations.

Building Functions
o Build new functions from existing functions.

Linear, Quadratic, and Exponential Models
o Construct and compare linear, quadratic, and exponential models and solve problems.
o Interpret expressions for functions in terms of the situation they model.

Trigonometric Functions
o Extend the domain of trigonometric functions using the unit circle.
o Prove and apply trigonometric identities.

Interpreting Categorical and Quantitative Data
o Summarize, represent, and interpret data on a single count or measurement variable.
o Summarize, represent, and interpret data on two categorical and quantitative variables.

Conditional Probability and the Rules of Probability
o Understand independence and conditional probability and use them to interpret data.
o Use the rules of probability to compute probabilities of compound events in a uniform probability model.

A PERSONAL NOTE:
The teacher reserves the right to change this syllabus as needed for academic purposes. Never be afraid to ask questions or to ask for help. If you or your parents wish to conference with me, please contact me to set up a meeting time and place. Do keep an accurate record of all your scores for this class. This will keep you informed as to how well you are doing.
Progress Reports will be handed out every four and a half weeks.
I hope we will have an enjoyable and successful semester in mathematics together. I am looking forward to teaching you and learning with you.

Mrs. Leath
Planning Period – 6th Period
School Phone Number – 731-989-8125
Email Address – darian.leath@chestercountyschools.org

Class Website- chestercountyschools.org (look under resources for students then staff websites)
We will also be using Google classroom.

Other useful websites:
State of Tn Website (List of standards, item samplers, and practice test)
Classzone.com (online book, workbook, tutor, and learning activities)
Intmath.com (interactive math website)
www.carnegielearning.com (Lessons and Practice)
im.kendallhunt.com (Lessons and Practice)
assistments.org (Practice)
desmons.com (Graphing Calculator)

CARRY OUT THE ASSIGNMENT BELOW
Please review the foregoing pages with a parent or guardian. Sign your name and have a parent or guardian sign also. The signatures indicate your understanding and acceptance of what is said on these pages. Please bring this back signed. A copy will go in your notebook for the class.
Student Signature _____Date _____
Parent/Guardian Signature _____Date _____

Respect ~ Trust ~ Honor