



Course Name	Instructor(s)	Instructor E-mail & Availability
Integrated Algebra, Geometry, and Trigonometry 3 (CORE3)	Randy Caswell Eric Law Shalese Stroup	rlcaswell@aps.k12.co.us enlaw@aps.k12.co.us sstroup@aps.k12.co.us
Course Website	Class Location(s):	Prerequisites
	Room 361 Room 362 Room 363	Successful completion of CORE2.

Course Description

In Integrated Math 3, exponential functions are considered over a domain of real numbers, necessitating work with fractional exponents. The logarithm is defined as the inverse of exponentiation and from this definition students consider the properties of logarithmic functions in addition to using them to solve for unknown exponents. Students extend their previous work with quadratics and polynomials to achieve a more general understanding of polynomials. In the geometric domain, when lines intersect circles, segments, angles, and arcs are created, with attending relationships that are proven and used to solve problems. This work with circles along with previous knowledge of sin, cos, and tan as operations combine in a study of the unit circle and $\sin(x)$, $\cos(x)$, and $\tan(x)$ as functions. Finally, students do further work in statistics where they revisit and extend their understanding of variability in data and of ways to describe variability in data. The normal distribution is studied, and students explore the reasoning that allows them to draw conclusions based on data from statistical studies.

Standards

A.APR.1: Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

A.APR.3: Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

A.SSE.2: Use the structure of an expression to identify ways to rewrite it.

A.SSE.1: Interpret expressions that represent a quantity in terms of its context.

A.CED.1: Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

A.CED.2: Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A.CED.3: Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

A.CED.4: Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

G.MG.1: Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

G.MG.3: Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

S.IC.1: Understand statistics as a process for making inferences about population parameters based on a random sample from that population.

S.IC.3: Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

F.TF.1: Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.

F.TF.2: Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.

Learning Outcomes by Quarter

Quarter 1

Students will be able to apply properties of polynomials.
Students will be able to solve for the zeroes of polynomials.

Quarter 2

Students will be able to identify and calculate key features of a polynomial.
 Students will be able to create equations and inequalities given a word problem.
 Students will be able to solve a system of inequalities.

Quarter 3

Students will be able to solve for a variable given a function.
 Students will be able to apply geometric functions to solve real world problems.

Quarter 4

Students will be able to use a unit circle to identify key trig functions in radians.
 Students will be able to analyze statistical data from surveys, experiments, and observational studies.
 Students will be able to determine and explain whether statistical data is biased or random and why.

Required Supplies

Students will be expected to come to class prepared with pencils and a math notebook.

Grading

Students will be graded on a 4 point scale for all assignments

Point	Letter Grade	Explanation
3.0-4.0	A	In addition to the performance score of 3.0, the student demonstrates in depth inferences and applications that extend beyond what was taught.
2.5-2.99	B	There are no major errors or omissions regarding any of the information and/or processes (simple or complex) that were explicitly taught. This level is mastery
2.0-2.49	C	There are no major errors or omissions regarding the simpler details and processes, but there are major errors or omissions regarding the more complex ideas and processes.
1.0-1.99	D	With help, the student demonstrates a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.
Below 1.0 or No Evidence	F	Even with help, the student cannot demonstrate understanding of the simple details.

School Policies

REQUESTS FOR HOMEWORK

Students requiring homework assignments due to extended excused absences (three days or more) should initially contact the attendance office. The attendance office will notify teachers and collect assignments from individual teachers. Assignments should be ready for pick up 24 hours after a request has been made. Please call the attendance office to check homework status.

MAKE-UP WORK DURING ABSENCES

Any time a student misses a class for any reason whatsoever, that student will be expected to contact each teacher and complete the make-up work in order to achieve the learning objective. This includes field trips, school activities, suspensions, group sessions, trancies, and the like. Make-up work is required and students who have been absent from class must request make-up work from the teacher no later than the next class meeting. Teachers will determine a reasonable amount of time for make-up work when students are absent, using a two days for every one day absent guideline.

Teachers may provide an "alternative" learning experience for make-up work to any student who requests it upon returning to class. For example, a student may have been absent from a class at which the daily learning objective was achieved by means of a class discussion. At the teacher's sole discretion, students who were absent during that discussion might be assigned a two or three-page written essay due three or four days after the student's return to class as an 'alternative' learning experience for that objective.

Teachers will give academic credit to all make-up work that complies with the above guidelines. The only exception is that teachers have the choice whether or not to give academic credit to the make-up work from an unexcused absence. If the absence was unexcused, the teacher should provide feedback but is not required to give credit for the work.

TARDY POLICY

After three tardies teachers will conference with the student and contact home. After 5 tardies students can be referred to the Learning Center and additional consequences may be assigned.

PASSES

Students who leave the classroom or are excused from class must have a pass with correct validation by the teacher. School officials may send for a student using an authorized Administrative Pass. Students who are without official passes will be subject to disciplinary action. Passes will not be given in the first 10 minutes or last 10 minutes of class.

NON-ACADEMIC TECHNOLOGICAL DEVICES

Aurora Public Schools believes in providing environments that optimize learning and teaching and are safe, secure, and well maintained. As such, all personal electronic devices* shall not be seen nor heard during the school day in academic areas of the building from 7:25 A.M. to 3:15 P.M. *Cell phones, iPods, headphones, portable speakers, MP3s, tablets, cameras, etc. **Aurora Central High School is not responsible for lost, stolen or damaged electronic devices.** This includes electronic devices that are confiscated by staff. Aurora Central High School reserves the right to not investigate lost, stolen or damaged electronic devices.

Classroom Policies

Classroom policies will be developed in concert with the students.

****The above standards and learning outcomes are subject to change.

Return THIS PAGE only and return to your Core 3 Teacher

I have carefully read the expectations of this course and agree to support the goals and initiatives of the course. I will show up, speak up, stand up and go further than I ever thought possible.

Student name: _____(print) Grade _____ Period _____

Student Signature: _____

Parent/Guardian Name: _____ (Print)

Parent/Guardian Signature: _____

Parent/Guardian Phone Number: _____

Parent/Guardian Email: _____

Languages Spoken: _____