Analytic Geometry Course Syllabus

Instructor: Quinton King **Room #:** 127 **Year: 2013-2014**

Course Name and Title: CCGPS Analytic Geometry A/B **Semester:** Fall/Spring

Textbooks Used: none (see teacher for information about digital resources) **Cost:** none

Supplementary Texts or Special Materials: Online Flexbook (specific information and links coming soon)

Course Description: The focus of Analytic Geometry on the coordinate plane is organized into 6 critical areas. Transformations on the coordinate plane provide opportunities for the formal study of congruence and similarity. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The study of circles uses similarity and congruence to develop basic theorems relating circles and lines. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. Quadratic expressions, equations, and functions are developed; comparing their characteristics and behavior to those of linear and exponential relationships from Coordinate Algebra. Circles return with their quadratic algebraic representations on the coordinate plane. The link between probability and data is explored through conditional probability. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Course Outline and Content: (more details are provided on teacher websites)

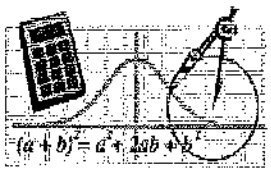
Fall Semester:
Unit 1: Similarity, Congruence, and Proofs
Unit 2: Right Triangle Trigonometry
Unit 3: Circles and Volume
Unit 4: Extending the Number System

Spring Semester:
Unit 5: Quadratic Functions
Unit 6: Modeling Geometry
Unit 7: Applications of Probability

HENRY COUNTY SCHOOLS

GRADE 10: CCGPS Math II/Analytic Geometry
Curriculum Map
MATHEMATICS
Henry County Schools

(adapted from Georgia Department of Education)
UPDATED JULY 2013



Common Core Georgia Performance Standards						
SEMESTER 1				SEMESTER 2		
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**
7 weeks	2 weeks	5 weeks	4 weeks	8 weeks	4 weeks	3 weeks
Similarity, Congruence and Proofs	**Right Triangle Trigonometry**	**Circles and Volume**	**Extending the Number System**	**Quadratic Functions**	**Modeling Geometry**	**Applications of Probability**
MCC9-12.G.SRT.1 MCC9-12.G.SRT.2 MCC9-12.G.SRT.3 MCC9-12.G.SRT.4 MCC9-12.G.SRT.5 MCC9-12.G.CO.6 MCC9-12.G.CO.7 MCC9-12.G.CO.8 MCC9-12.G.CO.9 MCC9-12.G.CO.10 MCC9-12.G.CO.11 MCC9-12.G.CO.12 MCC9-12.G.CO.13	MCC9-12.G.SRT.6 MCC9-12.G.SRT.7 MCC9-12.G.SRT.8	MCC9-12.G.C.1 MCC9-12.G.C.2 MCC9-12.G.C.3 MCC9-12.G.C.4(+) MCC9-12.G.C.5 MCC9-12.G.GMD.1 MCC9-12.G.GMD.2(+) MCC9-12.G.GMD.3	MCC9-12.N.RN.1 MCC9-12.N.RN.2 MCC9-12.N.RN.3 MCC9-12.N.CN.1 MCC9-12.N.CN.2 MCC9-12.N.CN.3(+) MCC9-12.A.APR.1	MCC9-12.N.CN.7 MCC9-12.A.SSE.1a,b MCC9-12.A.SSE.2 MCC9-12.A.SSE.3a,b MCC9-12.A.CED.1, 2, 4 MCC9-12.A.REI.4a,b MCC9-12.A.REI.7 MCC9-12.F.IF.4 - 6 MCC9-12.F.IF.7a, 8a MCC9-12.F.IF.9 MCC9-12.F.BF.1a,b MCC9-12.F.BF.3 MCC9-12.F.LE.3 MCC9-12.S.ID.6a	MCC9-12.A.REI.7 MCC9-12.G.GPE.1 MCC9-12.G.GPE.2 MCC9-12.G.GPE.4	MCC9-12.S.CP.1 MCC9-12.S.CP.2 MCC9-12.S.CP.3 MCC9-12.S.CP.4 MCC9-12.S.CP.5 MCC9-12.S.CP.6 MCC9-12.S.CP.7

These units were written to build upon concepts from prior units, so later units contain tasks that depend upon the concepts addressed in earlier units.
All units will include the Mathematical Practices and indicate skills to maintain.

NOTE: Mathematical standards are interwoven and should be addressed throughout the year in as many different units and tasks as possible in order to stress the natural connections that exist among mathematical topics.

Grade 9-12 Key:
Number and Quantity Strand: RN = The Real Number System, Q = Quantities, CN = Complex Number System, VM = Vector and Matrix Quantities
Algebra Strand: SSE = Seeing Structure in Expressions, APR = Arithmetic with Polynomial and Rational Expressions, CED = Creating Equations, REI = Reasoning with Equations and Inequalities
Functions Strand: IF = Interpreting Functions, LE = Linear and Exponential Models, BF = Building Functions, TF = Trigonometric Functions
Geometry Strand: CO = Congruence, SRT = Similarity, Right Triangles, and Trigonometry, C = Circles, GPE = Expressing Geometric Properties with Equations, GMD = Geometric Measurement and Dimension, MG = Modeling with Geometry
Statistics and Probability Strand: ID = Interpreting Categorical and Quantitative Data, IC = Making Inferences and Justifying Conclusions, CP = Conditional Probability and the Rules of Probability, MD = Using Probability to Make Decisions

Specific modeling standards appear throughout the high school standards indicated by a star symbol (★).

Special Assignments and Projects: There will be one large project each term. Information will be provided in a timely fashion and a sufficient amount of time will be given for students to complete the project.

Classroom Rules and Discipline Procedures:

To ensure an optimum learning environment, please adhere to the following:

- **Students will be respectful to all adults and classmates.**
- **Students will be seated in class when the bell rings.**
- **Students will not display cell phones, portable electronic devices or unauthorized materials in class unless directed by a teacher to do so.**
- **Students will use computers/technology appropriately at all times.**

Make-up Work Policies:

Unexcused absences will result in no grades awarded for the work given while absent. Excused absences allow the students to make up the work in the equal amount of time they were absent.

School-wide Grading Requirements as follows:

Semester Final Average:

Final exam/EOCT- 20%

Course Final Average- 80%

This course utilizes Standards Based Grading. All Standards/Standards Groups will share equal weight within each term. Students will take Assessments to demonstrate understanding of the standards and have opportunities for re-assessment when needed. The percentage sum for the standards will total 100% in the Course Final Average category, which will be 80% of the Semester Final Average.

Academic Integrity Policy:

Academic integrity is a fundamental value of quality education; therefore, Woodland High School will not tolerate any acts of cheating, plagiarism, or falsification of school work. Should it be determined that an academic integrity violation has taken place, the school reserves the right to assign a grade of a zero and submit a disciplinary referral to the appropriate Assistant Principal. The school also reserves the right to remove or suspend enrollment in any Advanced Placement/Honors classes as well as Academic Honor Societies.

Materials Needed: Notebook, notebook paper, graph paper, pencil, colored pencil, compass, ruler/straightedge, scientific calculator (see below)

Technology Information:

Scientific calculator (we recommend the Casio fx-115)

BYOT (Bring Your Own Technology): Students will be allowed to use smart phones, tablets, and laptops this year for EDUCATIONAL reasons. Free WIFI is provided in each class room. Please adhere to the Student Conduct and Appropriate School Network Policies as outlined in your student handbook and homeroom documents.

STUDENT/PARENT CONSENT OF UNDERSTANDING:

I have read and understand all of the objectives, requirements, and expectations for CCGPS Math II/Analytic Geometry taught by Mr. King.

_____ _____

Student signature **Date**

_____ _____

Parent signature **Date**