

KWSHS Math Department Course Pathway

Starting 9th Grade in Algebra 1

9th Grade

- ◆ ALGEBRA 1 (R)
Level 1-2 on Math FAST
- ◆ ALGEBRA 1 (H)
Level 3-5 on Math FAST



10th Grade

- ◆ GEOMETRY (R)
Level 1 & 2 ALG EOC
- ◆ GEOMETRY (H)
Level 3-5 ALG EOC



11th Grade

- ◆ Math for College Liberal Arts
Level 1/2 ALG & GEO EOC
 - ◆ ALGEBRA 2 (R)
Level 1-2 GEO EOC
 - ◆ ALGEBRA 2 (H)
Level 3-5 GEO EOC



12th Grade

- ◆ Math for Data Finance
 - ◆ Algebra 2 (R)
- ◆ Math for College Algebra
- ◆ Probability & Stats (H)
 - ◆ DE Statistics
- ◆ DE College Algebra/Trig
PERT 123, SAT 25.5, ACT 21
 - ◆ AP Pre-Calculus

Starting 9th Grade in Geometry

9th Grade

- ◆ GEOMETRY (R)
Level 1 or 2 on ALG EOC
- ◆ GEOMETRY (H)
Level 3-5 on ALG EOC



10th Grade

- ◆ ALGEBRA 2 (R)
Level 3-5 GEO EOC
- ◆ ALGEBRA 2 (H)
Level 3-5 on GEO EOC
- ◆ Math for College Liberal Arts
Only if they need Algebra 1 EOC score.



11th Grade

- ◆ Algebra 2 (R)
- ◆ Math for College Algebra
- ◆ Math for College Liberal Arts
 - ◆ Prob/Stats (H)
 - ◆ DE Statistics
- ◆ DE College Algebra/Trig
PERT 123, SAT 25.5, ACT 21



12th Grade

- ◆ Math for Data Finance
- ◆ Math for College Algebra
- ◆ Probability & Stats (H)
 - ◆ DE Statistics
- ◆ DE College Algebra/Trig
PERT 123, SAT 25.5, ACT 21
 - ◆ AP Pre-Calculus
 - ◆ DE Calculus 1 & 2
 - ◆ AP Calculus

Starting 9th Grade in Algebra 2

9th Grade

- ◆ Algebra 2 (R)
Level 1-2 on GEO EOC
- ◆ Algebra 2 (H)
Level 3-5 on GEO EOC



10th Grade

- ◆ Math for College Algebra
 - ◆ Prob/Stats (H)
 - ◆ DE Statistics
- ◆ DE College Algebra/Trig
PERT 123, SAT 25.5, ACT 21
 - ◆ AP Pre-Calculus



11th or 12th Grade

- ◆ Math for Data Finance
 - ◆ AP Pre-Calculus
 - ◆ DE Statistics
- ◆ DE College Algebra/Trig
PERT 123, SAT 25.5, ACT 21
 - ◆ DE Calculus 1 & 2
 - ◆ AP Calculus (AB & BC)



- ◆ 9th graders going into Algebra 1 that scored a level 1 in 8th grade, may need to take the Foundations Math elective course.
- ◆ 12th graders may also need to take the Foundations Math elective course if they have not passed Algebra EOC graduation requirement.
- ◆ It is suggested to take AP Pre-Calculus before AP Calculus.
- ◆ Must take DE College Algebra/Trig to move to DE Calculus.
- ◆ In addition, math courses may also be determined by grades, PSAT scores, and teacher recommendations.
- ◆ Math for College Algebra is taken after Algebra 2.
- ◆ If you have any questions see your school counselor or Mrs. Neda Jackson.

ALGEBRA 1 (1200310)

The purpose of this course is to develop the algebraic concepts and processes that can be used to solve a variety of real-world mathematical problems. The content includes but is not limited to the following: structure and properties of the real number system; exponents, square roots, radicals, absolute value, and scientific notation; varied means for analyzing and expressing patterns, relations, and functions; variables, algebraic expressions, polynomials, and operations with polynomials; coordinate geometry and graphing of equations and inequalities; data analysis concepts and techniques including introductory statistics and probability and varied solution strategies, algebraic and graphing for inequalities, linear and quadratic equations, and for systems of equations. *This is a year-long course, and passing the Algebra 1 EOC is required for graduation, and the EOC assessment makes up 30% of the final grade.

ALGEBRA 1 HONORS (1200320)

The purpose of this course is to develop the algebraic concepts and processes that can be used to solve a variety of real-world mathematical problems. The content includes but is not limited to the following: structure and properties of the real number system; exponents, square roots, radicals, absolute value, and scientific notation; varied means for analyzing and expressing patterns, relations, and functions; variables, algebraic expressions, polynomials, and operations with polynomials; coordinate geometry and graphing of equations and inequalities; data analysis concepts and techniques including introductory statistics and probability and varied solution strategies, algebraic and graphing for inequalities, linear and quadratic equations, and for systems of equations. The content of this course will provide a rigorous and in-depth study of Algebra, emphasizing deductive reasoning skills as a foundation for more advanced mathematics courses. *This is a year-long course, and passing the Algebra 1 EOC is required for graduation, and the EOC assessment makes up 30% of the final grade.

GEOMETRY (1206310)

The purpose of this course is to develop the geometric relationships and deductive strategies that can be used to solve a variety of real-world mathematical problems. The content includes but is not limited to the following: geometric constructions; terminology and fundamental properties of Geometry; deductive and inductive reasoning and their application to formal and informal proof; formulas pertaining to the measurement of plane and solid figures; coordinate geometry and transformations on the coordinate plane; exploration of geometric relationships such as parallelism, perpendicularity, congruence, and similarity; properties of circles and right triangle trigonometry. *This is a year-long course, and the EOC assessment makes up 30% of the final grade.

GEOMETRY HONORS (1206320)

The purpose of this course is to develop the geometric relationships and deductive strategies that can be used to solve a variety of real-world mathematical problems. The content includes but is not limited to the following: geometric constructions; terminology and fundamental properties of Geometry; deductive and inductive reasoning and their application to formal and informal proof; formulas pertaining to the measurement of plane and solid figures; coordinate geometry and transformations on the coordinate plane; exploration of geometric relationships such as parallelism, perpendicularity, congruence, and similarity; properties of circles and right triangle trigonometry. The content of this course will provide a rigorous and in-depth study of Geometry, emphasizing deductive reasoning skills as a foundation for more advanced mathematics courses. *This is a year-long course, and the EOC assessment makes up 30% of the final grade.

ALGEBRA 2 (1200330)

The purpose of this course is to continue the study of Algebra and to provide the foundation for applying algebraic skills to other mathematical and scientific fields. The content includes but is not limited to the following: structure and properties of the complex number system; arithmetic and geometric sequences and series; relations, functions and graphs extended to polynomial, exponential, and logarithmic functions; varied solution strategies for linear equations, inequalities, systems of equations and inequalities, and quadratic equations; conic sections and their applications; data analysis, including measures of central tendency and dispersion; probability, permutations, and combinations.

ALGEBRA 2 HONORS (1200340)

This course will provide a rigorous and in-depth study of Algebra, emphasizing deductive reasoning skills as a foundation for more advanced mathematics courses. Students need a strong algebra foundation to take this course. The purpose of this course is to continue the study of Algebra and to provide the foundation for applying algebraic skills to other mathematical and scientific fields. The content includes but is not limited to the following: structure and properties of the complex number system; arithmetic and geometric sequences and series; relations, functions, and graphs extended to polynomial, exponential, and logarithmic functions; varied solution strategies for linear equations, inequalities, systems of equations and inequalities, and quadratic equations; conic sections and their applications.

PROBABILITY & STATISTICS HONORS (1210300)

In Probability and Statistics Honors, instructional time will emphasize four areas: (1) creating and interpreting data displays for univariate and bivariate categorical and numerical data; (2) comparing and making observations about populations using statistical data, including confidence intervals and hypothesis testing; (3) extending understanding of probability and probability distributions and (4) developing an understanding of methods for collecting statistical data, including randomized trials.

MATH FOR COLLEGE ALGEBRA (1207350)

In Mathematics for College Algebra, instructional time will emphasize five areas: (1) developing fluency with the Laws of Exponents with numerical and algebraic expressions; (2) extending arithmetic operations with algebraic expressions to include rational and polynomial expressions; (3) solving onevariable exponential, logarithmic, radical and rational equations and interpreting the viability of solutions in real-world contexts; (4) modeling with and applying linear, quadratic, absolute value, exponential, logarithmic and piecewise functions and systems of linear equations and inequalities; (5) extending knowledge of functions to include inverse and composition. (Algebra 2 is a prerequisite for this course.)

MATHEMATICS FOR DATA & FINANCIAL LITERACY (1200710)

In Mathematics for Data and Financial Literacy, instructional time will emphasize five areas: (1) extending knowledge of ratios, proportions and functions to data and financial contexts; (2) developing understanding of basic economic and accounting principles; (3) determining advantages and disadvantages of credit accounts and short- and long-term loans; (4) developing understanding of planning for the future through investments, insurance and retirement plans and (5) extending knowledge of data analysis to create and evaluate reports and to make predictions.

MATHEMATICS FOR COLLEGE LIBERAL ARTS (1207350)

In Mathematics for College Liberal Arts, instructional time will emphasize five areas: (1) analyzing and applying linear and exponential functions within a real-world context; (2) utilizing geometric concepts to solve real-world problems; (3) extending understanding of probability theory; (4) representing and interpreting univariate and bivariate data and (5) developing understanding of logic and set theory.

AP PRE-CALCULUS (1202305)

AP Precalculus prepares students for other college-level mathematics and science courses. Through regular practice, students build deep mastery of modeling and functions, and they examine scenarios through multiple representations. The course framework delineates content and skills common to college precalculus courses that are foundational for careers in mathematics, physics, biology, health science, social science, and data science.

AP CALCULUS AB (1202310) & BC (12023220)

AP Calculus is an introductory college-level calculus course. Students cultivate their understanding of differential and integral calculus through engaging with real-world problems represented graphically, numerically, analytically, and verbally and using definitions and theorems to build arguments and justify conclusions as they explore concepts like change, limits, and the analysis of functions. ***Advanced Placement courses cannot be dropped after 4.5 weeks and requires a specific drop procedure. ALL STUDENTS ENROLLED IN AN AP COURSE ARE EXPECTED TO TAKE THE AP EXAM.

FOUNDATIONAL SKILLS IN MATHEMATICS (1200400) - Elective

This course supports students who need additional instruction in foundational mathematics skills as it relates to core instruction. Instruction will use explicit, systematic, and sequential approaches to mathematics instruction addressing all strands including number sense & operations, algebraic reasoning, functions, geometric reasoning and data analysis & probability. Teachers will use the listed benchmarks that correspond to each students' needs. This course is an elective course and satisfies an elective requirement for graduation.

DUAL ENROLLMENT COURSES THROUGH CFK

College Algebra MAC 1105
 Precalculus & Trigonometry MAC 1147
 Calculus 1 MAC 2311
 Calculus & Analytic Geometry 2 MAC 2312
 Probability & Statistics STA 2023