

HIGH SCHOOL MATHEMATICS COURSE DESCRIPTIONS

RECOMMENDED MATH COURSES FOR COLLEGE & CAREER READINESS

Desoto County High Schools emphasizes college and career readiness for our students with strong academic classes and a well-rounded elective experience.

9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE
*Ready for High School Math & Foundations to Algebra	Algebra I	Geometry	Algebra II/SREB Math/ Essential for College Math
Foundations to Algebra & Algebra I	Geometry or Algebra II	Algebra II/Geometry	Algebra III/ SREB Math/ Essential for College Math Dual Credit College Algebra
Algebra I	Geometry or Algebra II	Algebra II/Algebra III	Calculus/AP Calculus/AP Statistics Dual Credit College Algebra/Trigonometry
Algebra I/Geometry	Algebra II	Algebra III/Calculus/Dual Credit College Algebra/Trigonometry	Calculus/AP Calculus/AP Statistics Dual Credit College Algebra/Trigonometry

Please note that students are placed in courses based on scores/teacher recommendation. Course availability may vary. These pathways are suggested options. Courses marked with an asterisks (*) are recommended for incoming freshmen students depending on the level of mastery a student has demonstrated in middle school math courses.

HIGH SCHOOL MATHEMATICS COURSE DESCRIPTIONS

High School Ready & Foundations to Algebra I (year-long class) Grade 9 2 semesters/2.0 math credits
Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

This course provide a basis for curriculum development for rising 9th grade students in need of content support prior to taking Algebra I. The content of the course focuses on expressions and equations, inequalities, functions and linear relationships, polynomials, geometry, and statistics as well as mathematical practice. The standards in this course are based on core content that should have been mastered by the end of grade 8 and key skills that will be introduced in Algebra I.

Foundations to Algebra & Algebra I (year-long class) Grade 9 2 semesters/2.0 math credits
Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

This course is to provide 9th grade Algebra I students additional time and support prior to taking the *MAAP Algebra I Assessment* which students are required to pass in order to graduate. The course focuses on five critical areas in depth: (1) analyze and explain the process of solving equations and inequalities (2) learn function notation and develop the concepts of domain and range (3) use regression techniques (4) create quadratic and exponential expressions, and (5) select from among these functions to model phenomena. Students must participate in the Algebra I end-of-course assessment in order to earn the Carnegie Unit.

Compensatory Math & Algebra I (year-long class) Grade 10 2 semesters/1.0 elective/1.0 math credits
Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

This course is to provide 10th grade Algebra I students additional time and support prior to taking the *MAAP Algebra I Assessment* which students are required to pass in order to graduate. The course focuses on five critical areas in depth: (1) analyze and explain the process of solving equations and inequalities (2) learn function notation and develop the concepts of domain and range (3) use regression techniques (4) create quadratic and exponential expressions, and (5) select from among these functions to model phenomena. Students must participate in the Algebra I end-of-course assessment in order to earn the Carnegie Unit.

Algebra I (semester class) Grades 9-12 1 semester/1.0 credit

Prerequisite: Accelerated 8th grade Math with a final grade of 90 or higher & Teacher Recommendation

Suggested Calculator: Graphing Calculator (TI-83 or TI-84)

This is a fast paced course that focuses on five critical areas in greater depth: (1) analyze and explain the process of solving equations and inequalities (2) learn function notation and develop the concepts of domain and range (3) use regression techniques (4) create quadratic and exponential expressions, and (5) select from among these functions to model phenomena. Students must participate in the Algebra I end-of-course assessment in order to earn the Carnegie Unit.

Geometry (semester class) Grades 9-12 1 semester/1.0 credit

Prerequisite: Algebra I

Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

This course focuses on six critical areas: (1) build a thorough understanding of translations, reflections, and rotations (2) developing the understanding of similarity and several theorems (3) extension of formulas for 2-dimensional and 3-dimensional objects (4) extension of 8th grade geometric concepts of lines (5) prove basic theorem about circles, and (6) work with experimental and theoretical probability.

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Algebra II (semester class) Grades 9-12 1 semester/1.0 credit

Prerequisite: Algebra I

Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

This course focuses on four critical areas in greater depth: (1) working extensively with polynomial operations (2) building connections between geometry and trigonometric ratios (3) understanding a variety of function families, and (4) explore statistical data.

Algebra III (semester class) Grades 10-12 1 semester/1.0 credit

Prerequisite: Algebra I, Geometry & Algebra II

Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

Weighted credit 1.05

This course focuses on six critical areas in greater depth: (1) the complex number system (2) arithmetic with polynomials and rational expressions (3) operations with functions (4) conic sections (5) trigonometric functions, and (6) applications of trigonometry. Students also have the opportunity to study sequences and series, vectors, limits, and derivatives as an introduction to calculus.

Calculus (semester class) Grades 11-12 1 semester/1.0 credit

Prerequisite: Algebra I, Geometry, Algebra II & Algebra III with teacher recommendation

Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

Weighted credit 1.05

This course focuses on six critical areas in greater depth: (1) analytic geometry (2) functions (3) limits (4) continuity (5) derivatives of algebraic functions, and (6) applications of derivative.

AP Calculus AB (semester class) Grades 11-12 1 semester/1.0 credit

Prerequisite: Algebra I, Geometry, Algebra II & Algebra III with teacher recommendation

Suggested Calculator: Graphing Calculator (TI-83 or TI-84)

Weighted credit 1.10/AP Fee Required

AP Calculus AB is designed for students intending to study mathematics, engineering, or the hard sciences in college. The course includes differentiation and integration of polynomials, rational, algebraic, trigonometric, logarithmic, and exponential functions, and applications. Students will be expected to complete all daily assignments and perform satisfactorily on examinations. Emphasis is on preparation for the AP Exam. Students must take AP Exam in order to receive weighted credit.

AP Statistics (semester class) Grades 11-12 1 semester/1.0 credit

Prerequisite: Algebra I, Geometry & Algebra II with teacher recommendation

Suggested Calculator: Graphing Calculator (TI-83 or TI-84)

Weighted credit 1.10/AP Fee Required

This course involves an in-depth study of statistics and is designed to prepare students to take the Advanced Placement test in Statistics. Students will learn statistical methods of describing, summarizing, comparing, and interpreting data to include probability distributions, sampling, estimation, confidence intervals, and hypothesis testing. The course focuses on exploratory analysis, experimental design, probability and statistical inference. Emphasis is on preparation for the AP exam.

HIGH SCHOOL MATHEMATICS COURSE DESCRIPTIONS

Essentials for College Math/SREB Math Ready (semester class) Grade 12 1 semester/1.0 credit

Prerequisite: Algebra I

Suggested Calculator: Scientific or Graphing Calculator (TI-83 or TI-84)

The Southern Region Education Board (SREB) Math Ready Course is designed to assist students who are in need of a fourth year mathematics preparatory course prior to entering college. This course targets students with weaknesses and college-ready skill gaps and re-educates them in new ways to ensure they are prepared for postsecondary-level mathematics. Eight units comprise this course: (1) Algebra Expressions (2) Equations (3) Measurement and Proportional Reasoning (4) Linear Functions (5) Linear Systems of Equations (6) Quadratic Functions (7) Exponential Functions, and (8) Summarizing and Interpreting Statistical Data. Students enrolled in Essentials for College Math that receive a final grade of 80% or greater, will be allowed to bypass remedial math courses if attending a public college/university in Mississippi.

Dual Credit College Algebra (semester/mini-term class*) Grades 10-12 1 semester or 9 weeks/1.0 credit

Prerequisite: Algebra I, Geometry, Algebra II & ACT Math sub-score of 19 or higher.

Suggested Calculator: Non-Graphing Scientific Calculator (TI-30x)

Weighted credit 1.10/Dual Credit Fee Required

This course includes the study of inequalities, linear and quadratic equations, circles and their graphs, rational, radical, and higher-order equations, applications, polynomial and rational functions, logarithmic and exponential equations. Students must follow college guidelines and requirements.

**Terms varies by location*

Dual Credit Trigonometry (semester/mini-term class*) Grades 10-12 1 semester or 9 weeks/1.0 credit

Prerequisite: Algebra I, Geometry, Algebra II & "C" or higher in College Algebra or ACT Math sub-score of 20.

Suggested Calculator: Non-Graphing Calculator (TI-30x)

Weighted credit 1.10/Dual Credit Fee Required

This course includes trigonometric functions and their graphs, trigonometric equations, radian measurement, solutions of right and oblique triangles, inverse trigonometric functions, and applications. Students must follow college guidelines and requirements.

**Terms varies by location*