

MATHEMATICS 10th GRADE COURSES

ALGEBRA I

0718

2 Semesters 2 Credits Grades: 10-12

Fee: \$6.00

COURSE DESCRIPTION: [IDOE 2520] The Mathematics standards for Algebra I are made up of 5 strands: Real Numbers and Expressions; Functions; Linear Equations, Inequalities, and Functions; Systems of Equations and Inequalities; Quadratic and Exponential Equations and Functions; and Data Analysis and Statistics. Algebra 1 is a required course for graduation.

ALGEBRA II

0724

2 Semesters 2 Credits Grades 10-12

Prerequisite: Algebra I

Fee: \$5.00

COURSE DESCRIPTION: [IDOE 2522] The Mathematics standards for Algebra II are made up of 5 strands: Complex Numbers and Expressions; Functions; Systems of Equations; Quadratic Equations and Functions; Exponential & Logarithmic Equations and Functions; Polynomial, Rational, and Other Equations and Functions; and Data Analysis, Statistics, and Probability. Students who complete this course will enroll in Geometry 728.

A scientific calculator is required and students will gain experience using the graphing calculator.

ALGEBRA II ACCELERATED

0712

2 Semesters 2 Credits Grade: 10

Prerequisite: Geometry Acc (0725)

Fee: \$3.00

COURSE DESCRIPTION: [IDOE 2522] The Mathematics standards for Algebra II are made up of 5 strands: Complex Numbers and Expressions; Functions; Systems of Equations; Quadratic Equations and Functions; Exponential & Logarithmic Equations and Functions; Polynomial, Rational, and Other Equations and Functions; and Data Analysis, Statistics, and Probability. Students who are successful in this course should take Pre-Calculus Accelerated. A scientific calculator is required and students will gain experience using a graphing calculator.

ALGEBRA II, HONORS

0714

2 Semesters 2 Credits Grades 10-12

Prerequisite: Algebra I and Geometry ACC

Fee: \$3.00

COURSE DESCRIPTION: [IDOE 2522] The Mathematics standards for Algebra II are made up of 5 strands: Complex Numbers and Expressions; Functions; Systems of Equations; Quadratic Equations and Functions; Exponential & Logarithmic Equations and Functions; Polynomial, Rational, and Other Equations and Functions; and Data Analysis, Statistics, and Probability. This course is for students with superior performance in math. Compared to Algebra II, the pace of this course is accelerated and topics are covered in greater depth. Students will gain experience using the graphing calculator. A scientific calculator is required and a graphing calculator is highly recommended.

PRE-CALCULUS

0753 (3075)

Use 3075 to register for both Pre-Calc and Trig

1 Semester 1 Credit Grade: 10-12

Prerequisite: Algebra II and Geometry

Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2564] This course extends the foundations of algebra and functions developed in previous courses to new functions. The course includes concepts that must be mastered prior to enrollment in a college-level calculus class. A functional approach provides a means for examining linear, quadratic, higher degree, rational relationships and logarithmic functions. A scientific calculator is required and a graphing calculator is highly recommended.

TRIGONOMETRY

0732 (3075)

Use 3075 to register for both Pre-Calc and Trig
1 Semester 1 Credit Grade: 10-12
Prerequisite: Algebra II and Geometry
Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2566] Trigonometric relationships will be developed from an understanding of the circular function and their properties and graphs. Inverse trig functions, trig equations and identities, the Law of Sines and Cosines and applications of trig functions will be studied. The course also includes arithmetic and geometric sequences.

PRE-CALCULUS, ACCELERATED

0735 (3077)

Use 3077 to register for both Pre-Calc and Trig, Accelerated
1 Semester 1 Credit Grade: 10-12
Prerequisite: Algebra II Acc and Geometry Acc
Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2564] Pre-Calculus extends the foundation of algebra and functions developed in previous courses to new functions and to a more advanced level. Pre-Calculus is made up of the following strands: Complex Numbers, Functions, Quadratic, Polynomial and Rational Equations and Functions, Exponential and Logarithmic Equations and Functions. This course is designed to provide students with a strong foundation for Calculus. This course is preparing the students for ACP Calculus 215. Students with a strong A can take AP Calculus AB. A scientific calculator is required and a graphing calculator is highly recommended.

TRIGONOMETRY, ACCELERATED

0736 (3077)

Use 3077 to register for both Pre-Calc and Trig, Accelerated
1 Semester 1 Credit Grade: 10-12
Prerequisite: Algebra II Acc and Geometry Acc
Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2566] Trigonometry Accelerated provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Trigonometry consists of: Conics, Unit Circle, Periodic Functions, Identities, Polar Coordinates and Vectors. Trigonometry provides the foundation for common periodic functions that are encountered nearly all STEM disciplines. This course is preparing the students for ACP Calculus 215. Students with a strong "A" can take AP Calculus AB.

PRE-CALCULUS, HONORS

0733 (3076)

Use 3076 to register for both Pre-Calc and Trig, Honors
1 Semester 1 Credit Grades: 9-12
Prerequisite: Algebra II Honors and Geometry
Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2564] Pre-Calculus is an Honors course that extends the foundation of algebra and functions developed in previous courses to new functions and to a more advanced level. Pre-Calculus is made up of the following strands: Complex Numbers, Functions, Quadratic, Polynomial and Rational Equations and Functions, Exponential and Logarithmic Equations and Functions. This course is designed to provide students with a strong foundation for Calculus. This course is preparing the students for

AP Calculus AB and for students who expect math to be a major component of their college courses. A scientific calculator is required and a graphing calculator is highly recommended.

TRIGONOMETRY, HONORS

0738 (3076)

Use 3076 to register for both Pre-Calc and Trig, Honors

1 Semester 1 Credit Grade: 10-12

Prerequisite: Algebra II Honors and Geometry

Fee: \$1.50

COURSE DESCRIPTION: [IDOE 2566] Trigonometry is an Honors course that provides students with the skills and understandings that are necessary for advanced manipulation of angles and measurement. Trigonometry consists of: Conics, Unit Circle, Periodic Functions, Identities, Polar Coordinates and Vectors. Trigonometry provides the foundation for common periodic functions that are encountered nearly all STEM disciplines. This course is preparing the students for AP Calculus AB.

AP CALCULUS AB

0737

2 Semesters 2 Credits Grades: 10-12

Prerequisite: Pre-Calculus Honors

Fee: \$3.00

AP Exam: Determined annually by the College Board (last year's fee: \$85.00)

This course is weighted on a 5.0 scale.

COURSE DESCRIPTION: [IDOE 2562] This is a college Calculus course. It is designed for students who have demonstrated a superior performance in math. The pace of this course is more accelerated and the content depth is greater than in Honors courses. The course includes advanced integration and differentiation techniques. The use of a graphing calculator is central to the course. Students should be prepared to do a self-paced intensive Pre-Calculus review during the summer prior to entering the course. It is required that each student has a graphing calculator. A student may gain college credit with a successful score on the AP exam. *NOTE: In order to receive weighted credit and the Advanced Placement designation on transcripts, students must successfully complete both semesters of the Advanced Placement course and take the Advanced Placement examination in that course.*

AP STATISTICS

0767

2 Semesters 2 Credits Grades: 10-12

Prerequisite: Algebra II and Geometry

Fee: \$3.00

AP Exam: Determined annually by the College Board (last year's fee: \$85.00)

This course is weighted on a 5.0 scale.

COURSE DESCRIPTION: [IDOE 2570] This course is for mathematically able students who can work at a fast pace and wish to complete studies in high school, equivalent to a one-semester, non-calculus based college course in introductory statistics. It is recommended for juniors or seniors who will be exposed to four broad conceptual themes: exploring data by observing patterns and departures from patterns; planning a study to decide what and how to measure; producing models using probability and simulation; and using statistical inference to confirm models. The use of computer software and graphing calculator technology will be an integral part of the course. It is required that each student has a graphing calculator with statistical capabilities (the TI-83 or TI-84 is recommended. A student may gain college credit with a successful score on the AP exam.

NOTE: In order to receive weighted credit and the Advanced Placement designation on transcripts, students must successfully complete both semesters of the Advanced Placement course and take the Advanced Placement examination in that course.

MATH 10

0773

2 Semesters 2 Credits Grades: 10-11

Prerequisite: Must have attempted Algebra 1

Supplemental Fee: \$5.00

COURSE DESCRIPTION: [IDOE: 2531] Math 10 is a two-semester course designed to reinforce and elevate the Algebra 1 and 7th and 8th grade geometry knowledge and skills necessary for students to successfully complete high school mathematics courses beyond Algebra 1 and essentials for passing the state's graduation qualifying exam in mathematics. Enrollment will be contingent upon diagnostic results of performance in Algebra I and/or mathematics competency assessments. The standards for this course are aligned to the state standards that students need to master for success with the state's graduation qualifying exam in mathematics and the next level math courses.

Counts as a Mathematics Course for the General Diploma only or as an Elective for the Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas.