

MATHEMATICS

<u>COURSE OFFERINGS</u>	<u>SEMESTERS</u>	<u>GRADE LEVEL</u>	<u>PAGE</u>
Practical Algebra	2	9, 10, 11, 12	24
Algebra I	2	9, 10, 11, 12	24
Algebra II	2	(9), 10, 11, 12	24
Practical Geometry	2	10, 11, 12	25
Geometry	2	10, 11, 12	25
Trigonometry, Pre-Calculus	2	11, 12	25
Algebra III	2	11, 12	26
Honors Calculus	2	12	26

****FEES SUBJECT TO CHANGE**

NOTE: All Sophomores must take or have completed by the end of their sophomore year either Geometry or Practical Geometry.

PRACTICAL ALGEBRA I - 101

Prerequisites: Recommendation of previous mathematics teacher and results of algebra Aptitude Test

Length of Course: 2 semesters

Credit: 1

Course Fee: \$5.00

For: Grade 9, 10, 11, 12

Description: This is a course for non-college-intending students to strengthen the student's skills in practical algebra. It is the first course in a two-course sequence. The main emphasis of the course will focus on development of the following math benchmarks: 1) number, number sense, and operations; 2) measurement; 3) geometry and spatial sense; 4) patterns, basic algebra; 5) data analysis; 6) mathematical processes. A basic OGT calculator is required for homework.

ALGEBRA I - 111

Prerequisites: Recommendation of previous Mathematics teacher & results of Algebra Aptitude Test

Length of Course: 2 semesters

Credit: 1

Course Fee: None

For: Grades 9, 10, 11, 12

Description: This is a course for college-intending students to introduce the language and symbolism of Algebra. The use of variables and negative numbers in the solution of equations and inequalities is stressed. Additional work with exponents, numberline graphing, and measurements is contained in the course. Performing operations with polynomials, factoring, and dealing with fractions involving variables are covered extensively. Algebraic applications to Geometry, Statistics, and Probability will also be explored. A calculator is not required.

ALGEBRA II - 112

Prerequisites: Algebra I

Length of Course: 2 semesters

Credit: 1

Course Fee: None

For: Grades (9), 10, 11, 12

Description: This is a follow-up course to Algebra I. It is for college-intending students. Extensive work will be done with linear equations, irrational numbers, imaginary numbers, quadratic equations, and the Cartesian coordinate system. A calculator is not required.

PRACTICAL GEOMETRY - 102

Prerequisite: Practical Algebra

Length of Course: 2 semesters

Credit: 1

Course Fee: \$5.00

For: Grades 10, 11, 12

Description: This is a follow-up course to Practical Algebra and is for non-college-intending students. The course is designed to strengthen the student's skills. The main emphasis will focus on the continual mastery of the Practical Algebra applications. Additionally, emphasis will be focused on the math benchmark geometry and algebraic functions. A basic OGT calculator is required for homework.

GEOMETRY - 113

Prerequisites: Algebra I (Recommendation of Algebra teacher if grade is below "C")

Length of Course: 2 semesters

Credit: 1

Course Fee: \$3.00

For: Grades 10, 11, 12

Description: A course in which all aspects of elementary Geometry are considered. It will help the student develop knowledge and skills which will enable him to organize his ideas logically and to do sound deductive reasoning. Included are truths about angles, triangles, parallels, perpendiculars, areas, volumes, and trigonometry. Time is spent learning deductive reasoning by proving general statements about numbers and geometric figures and understanding numerical relationships of lines and angles

TRIGONOMETRY AND PRE-CALCULUS - 116

Prerequisites: Algebra II and Geometry

Length of Course: 2 semesters

Credit: 1

Course Fee: \$3.00

For: Grades 11, 12

Description: The concepts of trigonometry, analytic geometry, and calculus are integrated throughout the course. The concepts of trigonometry that are emphasized include angles and their trigonometric functions, trigonometry of right and oblique triangles, trigonometric equations, and inverse trigonometric equations. Slopes of lines, distance formulas, the midpoint formula, and equations of lines are the topics of analytic geometry that are stressed. Limits, introduction to differentiation, and integration are the areas of calculus that are explored. This course is an advanced mathematics course. Any student enrolled in this class must be willing to accept the challenge provided by the topics covered and the pace at which they are presented.

ALGEBRA III - 117

Prerequisites: Algebra II

Length of Course: 2 semesters

Credit: 1

Course Fee: \$3.00

For: Grade 11,12

Description: This course is designed for those students who want a fourth credit in mathematics but do not feel comfortable enrolling in an advanced level mathematics course. Algebra III will review and continue a study of Algebra topics with emphasis on preparing students for college placement tests and job and/or military placement tests. Some of the topics covered in this course will be a study of functions including linear equations and inequalities, piecewise-defined functions, quadratic functions, polynomial and rational functions, and exponential and logarithmic functions. These will be discussed using graphing, modeling, finding roots and intercepts, and applications whenever possible. Other concepts to be discussed will include matrices of linear systems, an introduction to probability and statistics, and an introduction to sequences and series.

HONORS CALCULUS - 118

Prerequisites: Trig/Pre-calculus and B- math average

Length of Course: 2 semesters

Credit: 1

Course Fee: \$3.00

For: Grade 12

Description: Calculus is considered to be the final level in the mathematics sequence. The course will continue to cover topics introduced in Pre-calculus in greater depth. Among topics to be introduced, discussed, and/or investigated will be the unit circle and related trig functions along with identities, limits, derivatives, integrals, and applications of these topics.

The student will complete some independent projects. Use of a graphing calculator (Texas Instrument TI-82) is recommended. The student may be allowed to take Pre-calculus and Calculus at the same time with recommendation of the instructor.