MATH DEPARTMENT

Pre-Algebra Grades 9-10-11-12 1 Year 1 credit
Prerequisite – Teacher recommendation
MA101-102
This course is the final course in arithmetic. This course is designed to develop expertise in the use of fractions, mixed numbers, signed numbers, exponents, and decimal numbers in any and all operations. It is also designed to refine skill in procedures for solving simple word problems. The concepts of area, percent, ratio, and order of operations are introduced. The beginning concepts of algebra are practiced through 1 year. Successful completion of this course insures total preparation for algebra.

Algebra I Grades 9-10-11-12 1 Year 1 credit
Prerequisite – Successful completion of Pre-Algebra or teacher recommendation
MA103-104
This course contains the standard topics of Algebra. Signed numbers are heavily emphasized as are integer exponents and scientific notation. Systems of two linear equations in two unknowns are practiced. Graphs and equations of linear functions are heavily emphasized. There is a strong emphasis on identifying word problems by type and learning the procedures for each type.

Geometry Grades 10-11-12 1 Year 1 credit
Prerequisite – Successful completion of Algebra I (HS or 8^{th} grade)
MA201-202
This is a study of Euclidian geometry – figures, lines, vectors, planes, angles and proofs including plane, solid and analytical geometry. This course is designed to develop skills in logical thinking both directly and indirectly. To demonstrate this ability of logic through indirect, deductive, and inductive reasoning by finding relationships in all the figures of the geometric system.

Applied Geometry Grades 10-11-12 1 Year 1 credit
Prerequisite – Pre-Algebra and/or High School Algebra
Recommendation of Math Teacher required
MA203-204
This course emphasizes problem-solving applications. An activity approach is utilized in which students are involved in hands-on learning activities. Activities may include, but are not limited to: the use of calculators, drawing aids, and measuring equipment. Diverse instructional strategies are utilized including cooperative learning, group problem solving, class discussion and generation of applied problems. The major goal of this course is to provide a learning environment that focuses on problem solving involving career and life experiences and critical thinking skills, rather than the textbook problems. Students will become problem solvers.
Disclaimer: This course may not qualify as a math requirement for college or university admissions. Students preparing for college will need to take Geometry MA201-202

Algebra II Grades 10-11-12 1 Year 1 credit
Prerequisite – Successful completion of Algebra I
MA301-302
This course is designed to prepare students for college Algebra. The topics that will be covered include numbers and functions, systems of lined equations, matrices, quadratic functions, exponential and logarithmic functions, polynomial functions, rational and radical functions, conics, counting principle and probability, series and patterns, statistics and trigonometry functions.

Probability & Statistics Grades 9-12 1 Semester ½ credit
Prerequisite: C or above in Algebra I
MA403
Introduction to basic statistical manipulations to include averages, standard deviation, and graphing of data both theoretical and student generated. This course will also introduce students to fundamental probability theory to include odds, probability of dependent and independent events, inclusive and mutually exclusive events, conditional probability and binomial theory.

College Algebra Grades 10-11-12 1 Year 1 credit
Prerequisite – Successful Completion of Algebra II
MA303-304
This course is designed to prepare students for a pre-calculus or upper-level Algebra class at the college level. It will cover approximately the first six chapters of the Larson-Hostetler Pre-calculus text. The topics that will be covered include polynomial and rational functions, exponential and logarithms functions, various topics in trigonometry, as well as Fundamental Trigonometric Identities.

Pre-Calculus Grades 11-12 1 Year 1 credit
Prerequisite – Successful completion of College Algebra
MA305-306
This course is a continuation of College Algebra. Chapters 7-10 of the Larson-Hostetler Pre-calculus text will be completed. The topics that will be covered include systems of equations and inequecities, matrices and determinants, sequences, series, and probability, as well as topics in analytic geometry. Successful completion of College Algebra and Pre-calculus should prepare students for a first-year Calculus class at the college level.