

COURSE DESCRIPTIONS

MATHEMATICS

(For MST Courses See MST Section)

Algebra 1 (42710211)

Grade level: 9th

Prerequisite(s): None

Algebra 1 includes the study of matrices, linear equations, linear inequalities, linear functions, polynomials, and quadratic functions. Successful completion of this sequence prepares students for Geometry.

Honors Algebra 1 (42710231)

Grade level: 9th

Prerequisite(s): None

HNR Algebra 1 includes the study of matrices, linear equations, linear inequalities, linear functions, systems of equations and inequalities, probability, polynomials, quadratic functions, and other functions including piecewise and absolute value.

Geometry (42720211)

Grade level: 10th

Prerequisite(s): Algebra I

Geometry includes the study of triangles, polygons, transformations, similarity, right triangle trigonometry, surface area, and volume. Successful completion of this course prepares a student for further work in Algebra II.

Honors Geometry (42720231)

Grade level: 10th

Prerequisite(s): Honors Algebra I

HNR Geometry includes the study of line and angle relationships, polygons, triangles, transformations, circles, areas, volume, Pythagorean Theorem, similarity, and right triangle trigonometry. Successful completion of this course prepares a student for further work in algebra, usually Honors Algebra II.

Advanced Program Geometry (42720291)

Grade level: 9th

Prerequisite(s): Advanced Program or Honors Algebra I

ADV Geometry includes the study of line and angle relationships, polygons, triangles, logic, proof, transformations, circles, areas, volume, Pythagorean Theorem, similarity and right triangle trigonometry. Additionally several algebra topics are addressed: solving multi-step one-variable equations, systems of equations, and quadratic equations.

Algebra 2 (42730211)

Grade level: 11th

Prerequisite(s): Algebra I and Geometry

Algebra 2 includes the study of functions including piecewise and absolute value, systems, exponential functions, sequences and series, probability, and statistics.

Honors Algebra 2 (42730231)

Grade level: 11th

Prerequisite(s): Honors Algebra I and Honors Geometry

HNR Algebra 2 provides a rigorous preparation for Honors Pre-Calculus. This course includes the study of probability, systems of equation and inequalities, polynomial expressions and operations, exponential and logarithmic functions, quadratics, data analysis, sequences and series, radical and rational expressions.

Advanced Program Algebra 2 (42730291)**Grade level: 10th****Prerequisite(s): Advanced Program Algebra I and Advanced Program Geometry**

ADV Algebra 2 includes the study of probability, systems of equations and inequalities, polynomial expressions and operations, exponential and logarithmic functions, quadratics, data analysis, sequences (explicit and recursive rules) and series, radical expressions and equations, rational expressions and equations, and trigonometric functions.

Honors College Algebra (42740031)**Grade level: 12th****Prerequisite(s): Honors Algebra II**

HNR College Algebra includes a review of linear equations and linear functions and an in-depth study of polynomial expressions/functions, quadratic equations/functions, rational expressions/functions, radical expressions, equations, and functions with radicals, exponential and logarithmic equations and functions, conics, matrices, introduction to linear programming, and non-linear systems.

Honors Pre-Calculus (42740231)**Grade level: 12th****Prerequisite(s): Algebra I, Geometry, and Algebra II**

HNR Pre-calculus includes the study of functions, polynomial functions, rational equations and functions, radical equations and functions, exponential equations and functions, logarithmic equations and functions, trigonometric functions, polar coordinates, vectors, and conics.

Advanced Program Pre-calculus (42740291)**Grade level: 11th****Prerequisite(s): Algebra I, Geometry, and Algebra II**

ADV Pre-calculus includes the study of functions, polynomial functions, rational functions, radical functions, exponential equations and functions, logarithmic equations and functions, trigonometric functions, polar coordinates, vectors, and conics. Successful completion of this course provides the student with the necessary Prerequisites for Advanced Placement Calculus.

Honors Calculus (42750231)**Grade level: 12th****Prerequisite(s): Algebra I, Geometry, Algebra II**

HNR Calculus includes the study of limit and continuity concepts, derivative as a slope and as a rate of change, applications of derivatives, integrals, and applications of integrals.

Advanced Placement AB Calculus (42750361) follows the College Board curriculum.**Grade level: 12th****Prerequisite(s): Successful completion of Advanced Program Pre-Calculus or MST Precalculus/Calculus**

This course includes a study of functions, graphs, limits, derivatives as points and functions, second derivatives, and applications of derivatives, integrals, and applications of integrals, Fundamental Theorem of Calculus, techniques and applications of antidifferentiation.

Note: College level curriculum taught in a high school setting

Advanced Placement Statistics (42750161)**Grade level: 10th-12th****Prerequisite(s): Honors Algebra II, Advanced Program Algebra II, or MST Geometry/College Algebra**

AP Statistics follows the College Board curriculum. This course includes graphical representations of data, measures of central tendency and variability, probability and probability distribution, normal distribution, inference for distributions, proportions, tables, and regressions.

Note: College level curriculum taught in a high school setting