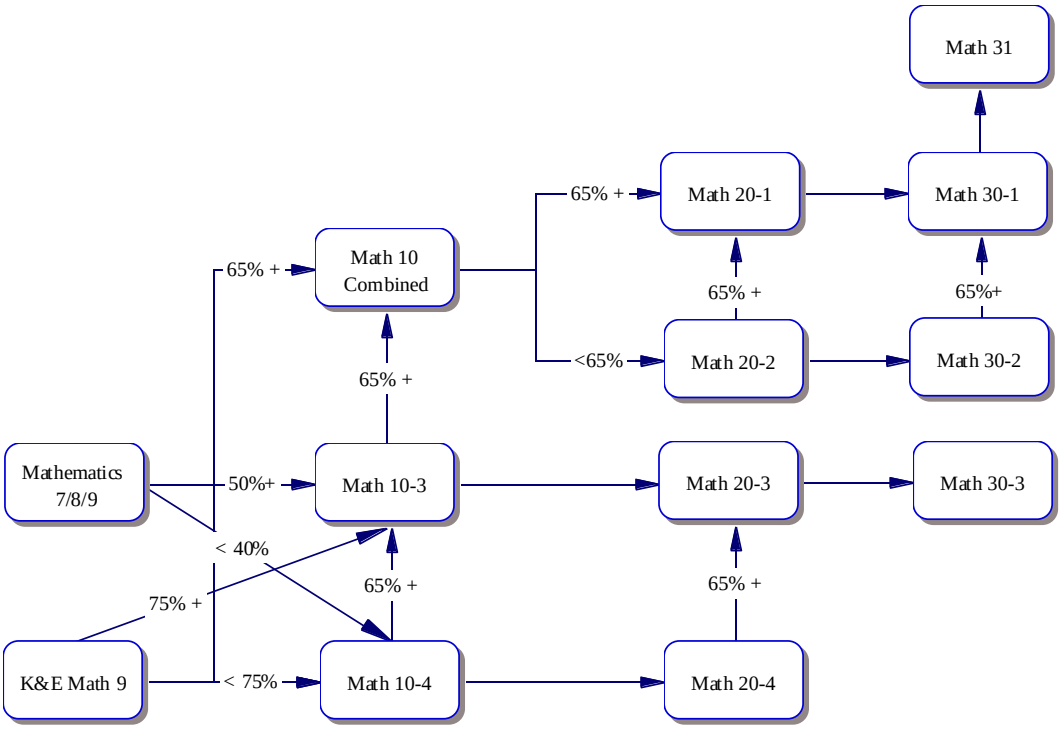
MATHEMATICS



Mathematics 7
Mathematics 7 supports the student outcomes for the Alberta Program of Studies. Through numerous and varied experiences, students gain appreciation and skill toward mastery of the concepts presented. This course provides opportunity for students to explore and understand the use of technology in solving mathematical problems and understanding its concepts. The instructional and assessment components of the course are Patterns and Relations; Integers; Fractions, Decimals, and Percents; Circles and Area; Operations with Fractions; Equations; Data Analysis; and Geometry.

Mathematics 8
Mathematics 8 supports the outcomes specified by the Western Canadian Protocol. Math 8 consists of eight units of study: Square Roots and the Pythagorean System; Integers; Operations with Fractions; Measuring Prisms and Cylinders; Percent, Ratio, and Rate; Linear Equations and Graphing; Data Analysis and Probability; and Geometry.

Mathematics 9
Mathematics 9 contains six instructional modules: Operations and Number Concepts, Exponential and Scientific Notation, Equations and Inequations, Polynomials, Measurement and Geometry, and Data Management. The problem-solving process is described in the beginning of each module, and several problem solving strategies are demonstrated.

Mathematics 10 Preparation (5 credits)
(Prerequisite: Mathematics 9 (less than 50%)

Mathematics 10 Preparation is designed for students who may wish to enroll in either Mathematics 10 Pure or Mathematics 10 Applied but are not sufficiently prepared for these courses. Students with weak mathematics backgrounds should take this course. Topics include Exploration of Numbers, Number Connections, Patterns, Polynomials, Shape and Space.

Mathematics 10 Pure (5 credits)
(Prerequisite: Mathematics 9 (at least 65%) or Math 10 Preparation (at least 65%)

Mathematics 10 Pure is the first course in the sequence designed for students with interest and aptitude in mathematics and intending to study university or college programs intensive in mathematics. Topics include Statistics and Data Tables, Patterns and Relations (including Coordinate Geometry), Algebra (including Polynomials and Rational Expressions), Number Connections, and Trigonometry.

Mathematics 10 Applied (5 credits)
(Prerequisite: Mathematics 9 (at least 50%) or Math Preparation 10 (at least 50%)

Mathematics 10 Applied includes topics of Measurement, Number Patterns in Tables, Relations and Functions, Line Segments, Linear Functions, and Trigonometry.

Mathematics 14 (5 credits)
(Prerequisite: Mathematics 9 (50% or less)

Mathematics 14 is followed by Mathematics 24 to meet the minimum mathematics requirements for an Alberta high school diploma. Designed for students whose needs, interests, and abilities focus on basic mathematical understanding, Math 14 emphasizes proficiency in using mathematics to solve problems, adapt to change, interpret information, and build on previous knowledge. Mathematics 14 contains five modules: Number; Patterns and Equations; Fractions, Ratio, and Percent; Measurement; and Geometry.

Mathematics 20 Pure (5 credits)
(Prerequisite: 50% in Mathematics 10 Pure or 65% in Mathematics 10 Applied)

This course is the continuation of Math 10 Pure. There is a continued emphasis on precise mathematical theory. Topics include Consumer Mathematics, Equations and Inequalities, Quadratics, Functions, and Mathematical Reasoning and Geometry.

Mathematics 20 Applied (5 credits)
(Prerequisite: 50% in Mathematics 10 Applied)

Mathematics 20 Applied follows Mathematics 10 Applied. Topics include Graphs, Non-Linear Functions, Linear Systems, Linear Programming, Finance, Circles, and Measurement.

Mathematics 24 (5 credits)
(Prerequisite: Mathematics 14 or Mathematics 10 Preparation)

Mathematics 24 completes the sequence of courses designed for students whose needs, interests, and abilities focus on basic mathematical understanding. Students successfully completing this course meet the minimum requirements in mathematics for the Alberta high school diploma. This course sequence emphasizes the acquisition of practical life skills and proficiency in using mathematics to solve problems, adapt to change, interpret information, and build on previous knowledge. Mathematics 24 contains 6 modules: Independent Living; Wheels; Applied Geometry; Maps, Data, and Probability; Statistics; and Design and Construction.

Mathematics 30 Pure (5 credits)
(Prerequisite: Mathematics 20 Pure with at least 50%)

Mathematics 30 Pure follows Mathematics 20 Pure and is designed for students with interest and aptitude in mathematics and/or intending university or college programs with intensive mathematics. Topics studied are Transformations, Exponents and Logarithms, Sequences and Series, Conics, Trigonometry, Combinatorics, and Probability and Statistics.

Mathematics 30 Applied (5 credits)
(Prerequisites: Mathematics 20 Applied with at least 50% or Mathematics 20 Pure with 40% +)

Mathematics 30 Applied follows Mathematics 20 Applied. Topics include Probability, Matrices, Statistics, Personal Finance, Sinusoidal Data, Patterns, and Vectors.

Mathematics 31 (5 credits)
(Prerequisite or Co-requisite: Mathematics 30 Pure)

Mathematics 31 consists of pre-calculus and calculus. Some topics are pre-calculus, limits, the derivatives, trigonometry, curve sketching, applications of the derivatives, and the integral, exponential, and logarithmic functions.