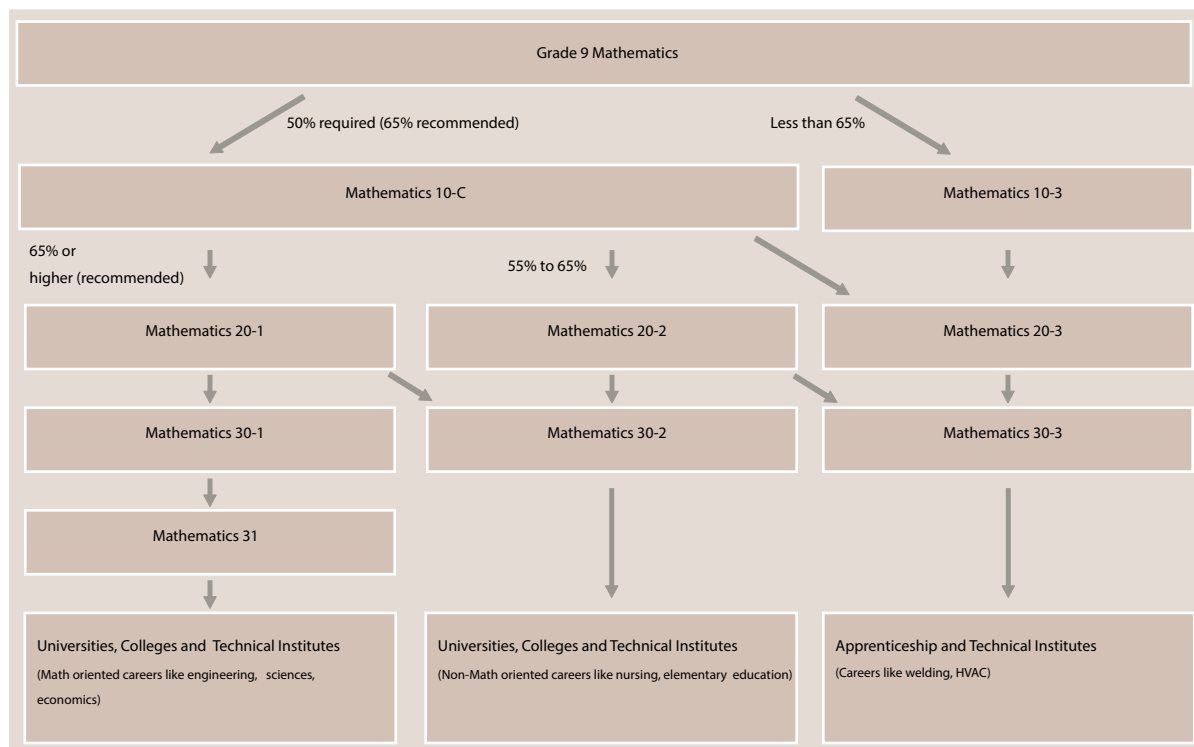


# DISCOVER MATHEMATICS

## COURSE SEQUENCE - MATHEMATICS



The high school mathematics curriculum provides three different sequences designed to best meet students' needs. The following provides a brief background on the mathematics course sequences at the high school level, but parents and students should seek advice from the counselling department and the mathematics department head if they are unsure of which sequence best meets the needs and abilities of the student.

The "-1" sequence is designed for students who are planning on pursuing post-secondary programs that require the study of calculus.

The "-2" sequence is designed for students who are planning on pursuing post-secondary studies in programs that do not require the study of calculus.

The "-3" sequence is designed for students who are planning on entry into the majority of trades and direct entry into the work force.

Grade 10 students planning to complete either the "-1" or "-2" sequence will enrol in Mathematics 10-C (10-Combined), while students planning to complete the "-3" sequence will enrol in 10-3.

### Math 10C

*5 credits*

A combined mathematics course for students planning on completing the "-1" or "-2" sequences. Students need to have successfully completed Mathematics 9 in order to enrol in Mathematics 10-C.

Units of study in this course include

measurement (systems of measurement, 3-dimensional geometry, trigonometry), algebra and number (exponents, radicals, polynomials), relations and functions (linear functions, equations, graphs), and systems of equations (graphical and algebraic solutions).

A TI-83+ or TI-84+ calculator is required for this course.

### Math 10-3

*5 credits*

The introductory course for students pursuing the "-3" sequence.

Units of study in this course include measurement (systems of measurement, surface area, volume), geometry (Pythagorean theorem, 2-dimensional geometry, trigonometry), number

(mathematics of income and finance), and algebra (algebraic manipulations and application). A scientific calculator is required for this course..

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### Math 15

*3 credits*

This course is designed for students who received a mark less than 65% in grade 9 math and would like to enroll in Math 10C. This course will focus on the foundational skills that are necessary for students to be successful in high school math.

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### Math 20-1

*5 credits*

Mathematics 20-1 is the grade 11 course in the -1 high school mathematics sequence. Students need to have successfully completed Mathematics 10-C to be enrolled in this course.

Topics of study include radical arithmetic and equations; rational expressions and equations; coordinate trigonometry and the sine and cosine laws; polynomial functions and inequalities; absolute value functions; quadratic functions and equations; and arithmetic and geometric sequences.

A TI-83+ or TI-84+ calculator is required for this course.

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### Math 20-2

*5 credits*

Mathematics 20-2 is the grade 11 course in the -2 high school mathematics sequence. Students need to have successfully completed Mathematics 10-C to be enrolled in this course.

Topics of study include rate, ratios, and scale factors; trigonometric proofs and the sine and cosine laws; inductive and deductive reasoning; radical arithmetic

and equations; statistics; and quadratic functions and equations.

A TI-83+ or TI-84+ calculator is required for this course.

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### Math 20-3

*5 credits*

Mathematics 20-3 is the grade 11 course in the -3 high school mathematics sequence. Students need to have successfully completed Mathematics 10-3 to be enrolled in this course.

Topics of study include surface area and volume; right angle trigonometry; numerical reasoning; finance; slope and unit analysis; and statistical graphing. A scientific calculator is required for this course..

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### Math 30-1

*5 credits*

Mathematics 30-1 is the grade 12 course in the -1 high school mathematics sequence. Students need to have successfully completed Mathematics 20-1 to be enrolled in this course.

Topics of study include trigonometric functions, equations and identities; function composition and transformations; logarithmic and exponential functions; polynomial, rational and radical functions; and combinatorics.

A TI-83+ or a TI-84+ calculator is required for this course.

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### Math 30-2

*5 credits*

Mathematics 30-2 is the grade 12 course in the -2 high school mathematics sequence. Students need to have successfully completed Mathematics 20-2

Topics of study include logic and reasoning; probability and combinatorics; rational expressions and equations; logarithmic and exponential functions; and exponential, logarithmic, polynomial and sinusoidal data.

A TI-83+ or TI84+ graphing calculator is required for this course.

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### Math 30-3

*5 credits*

Mathematics 30-3 is the grade 12 course in the -3 high school mathematics sequence. Students need to have successfully completed Mathematics 20-3 to be enrolled in this course.

Topics of study include measurement; applied trigonometry; two-and three-dimensional transformations; vehicle and small business finance; linear relations; statistics; and probability. A scientific calculator is required for this course..

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### Math 31

*5 credits*

Math 31 is a course in basic differential and integral calculus, and is designed for those students planning on enrolling in post-secondary programs such as engineering, commerce, and science. Completion of this course provides students with significant preparatory skills for their first year calculus courses in post-secondary programs. Topics of study include limits, rules of differentiation, applications of derivatives, calculus of trigonometric, exponential, & logarithmic functions, antidifferentiation, techniques of integration & differentials, and applications of integration. Math 30-1 is a prerequisite / co-requisite for Math 31.