Guide to Mathematics Curriculum Pathways

Mathematics 8

Mathematics 9 Adapted

Workplace Mathematics 10
(for students pursuing a trades or technical program/job after high school)

Workplace Mathematics 11
(for students pursuing a trades or technical program/job after high school)

Apprenticeship Mathematics 12
(for students pursuing a trades or technical program/job after high school)

Mathematics 9

Foundations of Mathematics 10
(for students entering post-secondary Humanities and some Sciences)

Foundations of Mathematics 11
(for students entering post-secondary Humanities and some Sciences)

Foundations of Mathematics 12
(for students entering post-secondary Humanities and some Sciences)

Pre-Calculus 10
(for students planning on entering post-secondary Sciences, Business, Engineering)

Pre-Calculus 11
(for students planning on entering post-secondary Sciences, Business, Engineering)

Pre-Calculus 12
(for students planning on entering post-secondary Sciences, Business, Engineering)

Calculus 12
(this course may be taken at the same time as Pre-Calculus 12. There is an option to write an AP exam and get university credit)

Mathematics 9

This course expands on many of the topics taught in Math 8. Topics include operations with rational numbers, square roots and exponents, polynomials and algebra, linear relations, scale factors and statistics. Students will engage in experiences with concrete materials, visualize, and discuss their thinking with others in order to create deeper understanding. Students will learn to be investigative thinkers, and will build perseverance through solving challenging problems. At the end of this course, students will be prepared for Pre-Calculus Mathematics 10 OR Foundations of Mathematics 10 OR Workplace and Apprenticeship Mathematics 10.

Workplace Mathematics 10

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into the majority of trades programs and for direct entry into the work force. Topics include understanding and applying the metric and imperial systems to the measurement of 2-D and 3-D objects, geometry and trigonometry, and the fundamentals of income, spending and debt. Students completing this course will move on to Workplace Math 11.

*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

Foundations of Mathematics 10

This course covers the same topics as Pre-Calculus Mathematics 10 but is an easier course, designed to provide students with the mathematical understandings and critical thinking skills identified for post secondary studies in the arts (not sciences). Topics include exponents, polynomials, relations and functions, linear equations and graphs, applying trigonometric ratios to right triangles, systems of linear equations, and finance. Students with a credit for Foundations of Mathematics 10 are eligible to take Foundations of Mathematics 11.

*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

Pre-Calculus Mathematics 10

This rigorous course has the same topics as Foundations of Mathematics 10 but is more difficult. It is designed to provide students with the mathematical understandings and critical thinking skills identified for post secondary studies in both the arts and the sciences. Topics include exponents, polynomials, relations and functions, linear equations and graphs, applying trigonometric ratios to right triangles, systems of linear equations, and finance. Students with a credit for Pre-Calculus Mathematics 10 are eligible to take Pre-Calculus Mathematics 11.

*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

Workplace Mathematics 11

This course is recommended for students who are planning on entering the workforce directly after high school, or who are planning on pursuing a career in the trades industries. Topics covered include budgeting, finance, linear relations, statistics, trigonometry, measurement and scale. Students who successfully master the learning outcomes of this course may continue on to Apprenticeship Mathematics 12. This course satisfies the Ministry of Education's mathematics graduation requirements

Foundations of Mathematics 11

This course is recommended for students who are planning on pursuing post-secondary studies in the arts or the humanities. Topics studied include ratios, rates, proportions, geometry, finance, statistics, linear equations and inequalities and relations and functions. Students who successfully master the learning outcomes of this course may continue on to Foundations of Mathematics 12. This course satisfies the Ministry of Education's mathematics graduation requirements.

*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

Pre-Calculus Mathematics 11

This course is recommended for students who are planning on pursuing post-secondary studies in math, sciences, engineering, and business. Topics covered include sequences and series, trigonometry, quadratic functions and equations, radical equations, rational expressions and equations, finance, and liner and quadratic inequalities. Students who successfully master the learning outcomes of this course may continue on to Pre-calculus 12. This course satisfies the Ministry of Education's mathematics graduation requirements but students planning on attending post-secondary math, sciences, engineering and business programs will likely also require Pre-Calculus Mathematics 12 and possibly Calculus 12.

*Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.

Apprenticeship Mathematics 12

This elective course is recommended for students who are planning on pursuing a career in the trades industries. Topics covered include buying/leasing vehicles, small business management, linear relations, accuracy in measurement, trigonometry, and statistics.

Foundations of Mathematics 12

This elective course may be required for some students who are planning on pursuing post-secondary studies in the arts or the humanities. Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Topics studied include financial decision making, investments, functions (polynomial, exponential, logarithmic, trigonometric), and probability.

Pre-Calculus Mathematics 12

This elective course may be required for admission into post-secondary. It is strongly recommended for students who are planning on pursuing post-secondary studies in math, sciences, engineering and business. Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year. Topics covered include trigonometry, functions (trig, radicals, composite, logarithmic, exponential, polynomial, and rational), transformations, logarithmic and exponential equations, and combinatorics.

Calculus 12 (or AP Calculus 12 AB)

This elective course is strongly recommended for students who are planning on pursuing post-secondary studies in math, sciences, engineering or business. Students may elect to write an Advanced Placement exam upon completion of this course and obtain credit for a first semester Calculus course at most post-secondary institutions. It is recommended that students have credit for Pre-Calculus Math 12 before starting Calculus 12, although the two courses may be taken concurrently. For students who are 2 years ahead in math, there is also the option of taking AP Calculus 12 BC which would potentially give credit for 1st and 2nd semester post secondary math courses.