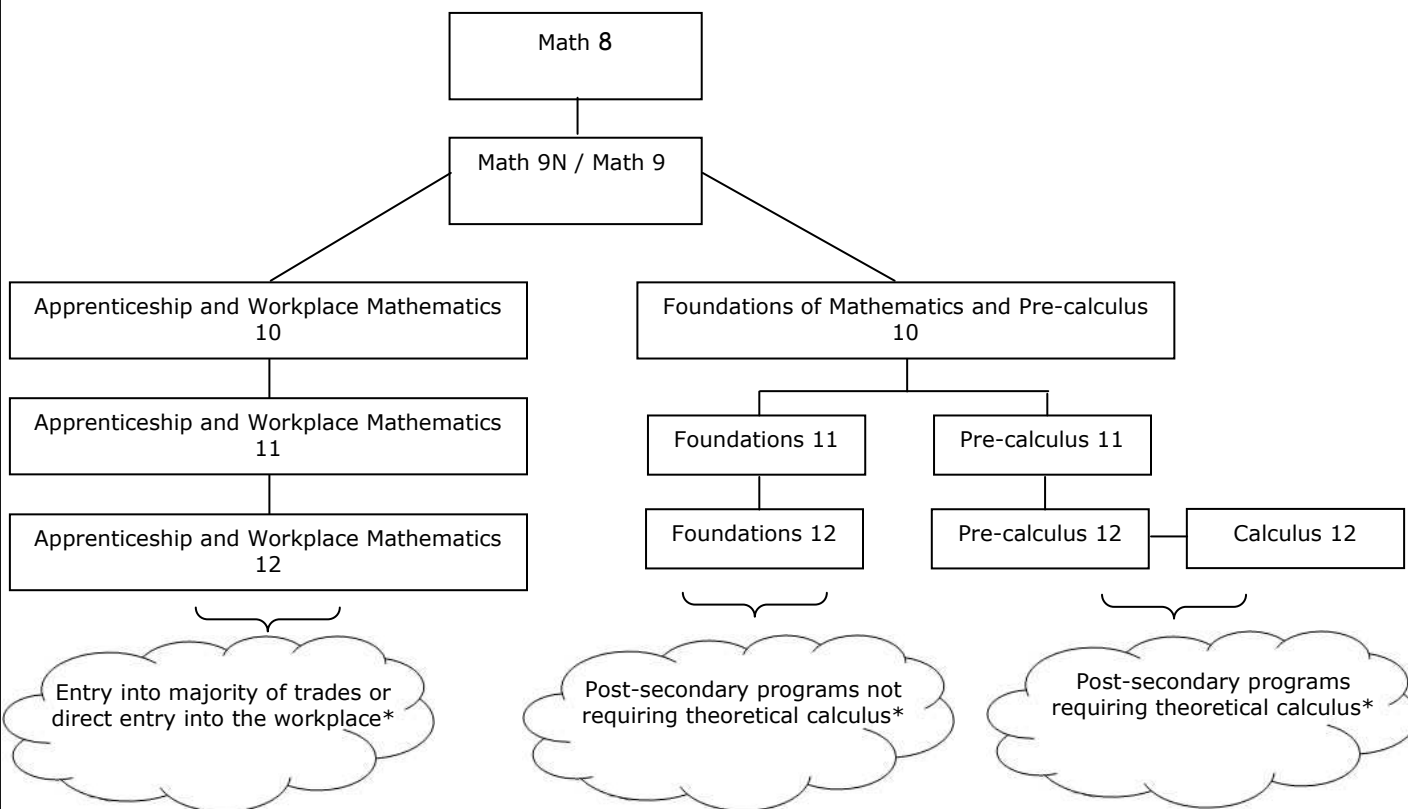


MATHEMATICS

GRADE 8, 9, & 10 STUDENTS (GRADUATES OF 2013, 2014 & 2015):

The Ministry of Education has introduced a new math curriculum that will begin for grade 10s in September 2010. The new math curriculum includes 3 available pathways for students. The three pathways available are: Apprenticeship and Workplace Mathematics, Foundations of Mathematics, and Pre-Calculus. At the grade 10 level a common Foundations of Mathematics and Pre-Calculus course is the starting point for both the Foundations of Mathematics and Pre-Calculus pathways. When choosing a pathway, students should consider their interests, both current and future. ***Students and parents are encouraged to research the admission requirements for post-secondary programs as they vary by institution and by year.**



Related Focus Areas: Trades and Technology, Science and Applied Science, Health and Human Service, Business and Applied Business

MATHEMATICS - FOR GRADE 8, 9 & 10 STUDENTS (GRADUATES OF 2013, 2014 & 2015)

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MATHEMATICS 8 (MA8)

Grade 8 Math is a student-centered introduction to high school mathematics. The main topics are the Pythagorean Theorem, fractions, algebra, integers and geometry. Math 8 builds on foundational concepts from previous years and moves the student forward in their mathematical understanding and reasoning skills. The new curriculum, introduced in September 2007, focuses on understanding math on several levels, finding answers using multiple methods and being able to explain the answer. A scientific calculator is required. The TI 30Xa is an acceptable calculator but students may prefer to work with TI-30X IIS (or similar calculator) due to its ability to display the equation.

MATHEMATICS 9 PRINCIPLES (MA9)

Principles of Mathematics 9 builds on the concepts taught in Math 8. In addition to taking each concept to a greater level of understanding, it also combines math subjects and sets up systems that enable improved success at higher levels of math. New topics include image transformation, circle geometry, probability considerations, polynomial math, graphing linear equations and solving linear inequalities. A scientific calculator is required. The TI 30Xa is an acceptable calculator but students may prefer to work with TI-30X IIS (or similar calculator) due to its ability to display the equation.

MATHEMATICS 9N NUMERACY (MA9N)

This course is designed for students who have put forth a sincere effort in Mathematics 8, as shown by their work habits, but who have found difficulty grasping the course concepts. Without this foundational knowledge, students will find it difficult to succeed in Principles of Mathematics 9. ***Mathematics 9 Numeracy will be integrated into the Principles of Mathematics 9 course; students will cover the same topics as Math 9 but at a reduced level of difficulty.*** Students who are successful in Math 9N will continue on to Apprenticeship and Workplace Mathematics 10. A scientific calculator is required. The TI 30Xa is an acceptable calculator but students may prefer to work with TI-30X IIS (or similar calculator) due to its ability to display the equation.

APPRENTICESHIP & WORKPLACE MATHEMATICS 10

(Provincial Exam - Mandatory)

This course is designed to provide students with the mathematical understanding and critical-thinking skills identified for entry into the majority of trades and for direct entry into the work force. Topics include problem solving, number operations, algebra, geometry and measurement. Students are assessed by their work on assignments, quizzes, tests and projects. There is a required provincial exam at the end of the course worth 20 percent of the total mark. A scientific calculator is required.

FOUNDATIONS OF MATHEMATICS & PRE-CALCULUS 10

(Provincial Exam - Mandatory)

This course is designed to provide students with the mathematical understanding and critical-thinking skills identified for post-secondary studies. This course leads to either Foundations of Mathematics 11 or Pre-Calculus 11. Topics include problem solving, number operations, algebra, relations, functions and measurement. Assessments include assignments, quizzes, tests and projects. There is a required final exam which is worth 20 percent of the total mark. Students must have a scientific calculator. Some students may want to begin working with a TI83 or TI84 graphing calculator in grade 10 (the required calculators in Math 11).

APPRENTICESHIP & WORKPLACE MATHEMATICS 11

As with the grade 10 course, Apprenticeship and Workplace Math 11 is designed to provide students with the mathematical understanding and critical-thinking skills identified for entry into the majority of trades and for direct entry into the work force. Topics include formula manipulation, financial math, 3-dimensional area and volume calculations, use of the Sine and Cosine laws, and statistical graphs. Students are assessed by their work on assignments, quizzes, tests, projects and a final exam in June. A scientific calculator is required.

FOUNDATIONS OF MATHEMATICS 11

Foundations of Mathematics 11 builds on the skills acquired in Foundations and Pre-Calculus 10 and is designed for students going on to secondary programs where an academic math, but not calculus, is required. Each student must check the requirements of his or her preferred post-secondary program to ensure that Foundations of Mathematics 11 is the appropriate choice. Topics include rates and scale, geometric proofs, systems of linear equations in two variables, quadratic functions, normal distribution and standard deviation. Assessments include assignments, quizzes, tests and projects (including a research project on an historical event or area of interest in mathematics) and a final exam. A graphing calculator, preferably a TI83 or TI84, is required. These are available for rent in September if a student chooses this option.

PRE-CALCULUS 11

Pre-Calculus 11 builds on the skills acquired in Foundations and Pre-Calculus 10 and is particularly designed for those students going into post-secondary programs where Calculus is required. Topics include absolute value functions, radical expressions and equations, factoring polynomials, quadratic functions, linear and quadratic inequalities, arithmetic and geometric sequences, and the Sine and Cosine laws. Assessments include assignments, quizzes, tests, projects and a final exam in June. A graphing calculator, preferably a TI83 or TI84, is required. These are available for rent in September if a student chooses this option.

APPRENTICESHIP & WORKPLACE MATHEMATICS 12 (Provincial Exam - Optional)

This course continues to prepare students for entry into the majority of trades and for direct entry into the work force. Topics include financial math, precision and accuracy in measurements and calculations, probability, percentiles, measures of central tendency and additional work with the Sine and Cosine Laws. Students are assessed by their work on assignments, quizzes, tests, projects and a final exam in June. A scientific calculator is required.

FOUNDATIONS OF MATHEMATICS 12 (Provincial Exam - Optional)

This course continues to prepare students for many post-secondary programs. Topics include financial math (including investment portfolios), higher level probability (permutations and combinations), exponential and logarithmic functions and sinusoidal functions. Assessments include assignments, quizzes, tests, projects (including a research project based on a current event or area of interest in mathematics) and a final exam. A graphing calculator, preferably a TI83 or TI84, is required for this course.

PRE-CALCULUS 12 (Provincial Exam - Optional)

This course continues to prepare students for post-secondary programs requiring the highest level of mathematics. Topics include advanced probability (permutations and combinations,) graphical manipulation of functions, graphs of polynomial functions (up to and including 5th degree), radical and rational functions, advanced trigonometry including inverse function, trigonometric equations and trigonometric proofs . Students are assessed by their work on assignments, quizzes, tests, projects and a final June exam. A graphing calculator, preferably a TI83 or TI84, is required for this course.

CALCULUS 12 (CALC12)

This course is designed to provide students with a foundational understanding of calculus so that they are better able to succeed in Calculus at the college or university level. Topics include limits of functions, continuity as a property of a function, derivatives, applications of derivatives, methods of integration, and applications of integration. Assessments include assignments, quizzes, and tests and a final exam in June. Students must have a TI83 or TI84 graphing calculator.