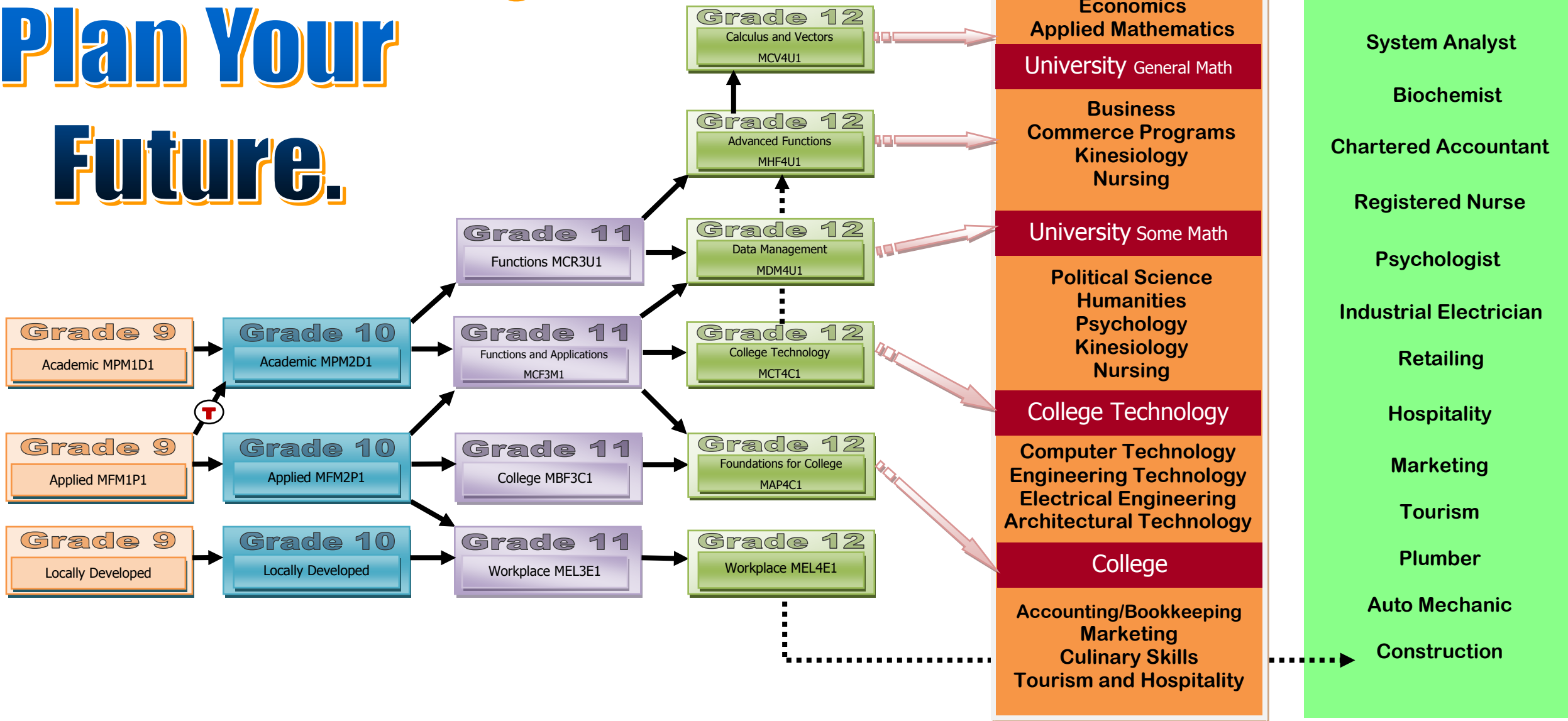


**Ontario Secondary Courses**

# Mathematics

@ Cardinal Ambrozic

## Plan Your Future.



# Mathematics at Cardinal Ambrozic

*Mathematics is the language with which God has written the universe* (Galileo). To learn mathematics effectively, students must be exposed to the mathematics of real-world problems. The central theme of mathematics at Cardinal Ambrozic is **Project Based Learning**, where students focus on solving problems within a real-world context. Students are exposed to various tools such as graphing calculators, dynamic geometry and statistical software, virtual tools and traditional mathematical manipulatives, to solve problems in small group settings

Mathematics in grade 9 and 10 is offered in 3 programs: Locally Developed, Applied and Academic. The difference in each program is describe below.

*Locally Developed courses deepen the students' understanding of mathematical concepts by connecting real life and mathematics. Classes are generally smaller. This allows for direct student-teacher interaction.*

*Applied courses focus on the essential concepts of a subject, and develop students' knowledge and skills through practical applications and concrete examples. Familiar situations are used to illustrate ideas, and students are given more opportunities to experience hands-on applications of the concepts and theories they study. Classes are generally smaller than academic classes.*

*Academic courses develop students' knowledge and skills through the study of abstract math problems. These courses focus on the essential concepts of the subject and extend to greater comprehensive applications. Academic math Courses Cover more content, at a quicker pace resulting in the need for great student responsibility and greater independent learning.*

## Principles of Mathematics, Grade 9, Academic (MPM1D1)

This course enables students to develop an understanding of mathematical concepts related to algebra, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning.

## Foundations of Mathematics, Grade 9, Applied (MFM1P1)

This course enables students to develop an understanding of mathematical concepts related to introductory algebra, proportional reasoning, and measurement and geometry through investigation, the effective use of technology, and hands-on activities.

## Locally Developed Compulsory Credit, (MAT1L1) Grade 9

In all strands, the focus is on developing and consolidating key foundational mathematical concepts and skills by solving authentic, everyday problems.

## Principles of Mathematics, Grade 10, Academic (MPM2D1)

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning.

## Foundations of Mathematics, Grade 10, Applied (MFM2P1)

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities.

## Locally Developed Compulsory Credit, (MAT2L1) Grade 10

The course is organized in three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on developing and consolidating key foundational mathematical concepts and skills by solving authentic, everyday problems.

## Functions, Grade 11, University (MCR3U1)

Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions, linear functions, quadratic functions; solve problems involving applications of functions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

## Functions and Applications, Grade 11, University/College (MCF3M1)

This course focuses on quadratic, trigonometric, and exponential functions and their use in modelling real-world situations. Students will solve problems relating to applications. This course can be used to lead into University.

## Foundations for College Mathematics, Grade 11, College (MBF3M1)

This course enables students to broaden their understanding of mathematics as a problem solving tool in the real world. This course is required for several College programs.

## Mathematics for Work and Everyday Life, Grade 11, Workplace (MEL3E1)

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will solve problems associated with earning money, paying taxes, and making purchases;

## Calculus and Vectors, Grade 12, University (MCV4U1)

This course is intended for students who choose to pursue careers in fields such as science, engineering, economics, and some areas of business, including those students who will be required to take a university-level calculus, linear algebra, or physics course.

## Advanced Functions, Grade 12, University (MHF4U1)

This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

## Mathematics of Data Management, Grade 12, University (MDM4U1)

Students planning to enter university programs in business, the social sciences, and the humanities will find this course of particular interest.

## Foundations for College Mathematics, Grade 12, College (MAP4C1)

This course prepares students for college programs in areas such as business, health sciences, and human services, and for certain skilled trades.

## Mathematics for College Technology, Grade 12, College (MCT4C1)

This course prepares students for a variety of college technology programs.

## Mathematics for Work and Everyday Life, Grade 12, Workplace (MEL4E1)

Students will solve problems associated with earning money, paying taxes, and making purchases.

# Cardinal Ambrozic



Cardinal Ambrozic C.S.S. Mathematics Department

# Mathematics



2011 - 2012