

North Toronto C.I. Grade 9 Mathematics Program

1. Grade 9 Mathematics Options

Course Title	Course Code	Pre-requisite
Principles of Mathematics (Academic)	MPM1D1	Grade 8 Math
Foundations of Mathematics (Applied)	MFM1P1	Grade 8 Math
Principles of Mathematics (Enriched)	MPM1D3	Grade 8 Math + Placement Test on March 8

Academic Grade 9 Math (MPM1D)

Course Description:

This course enables students to develop generalizations of mathematical ideas and methods through the exploration of applications, the effective use of technology, and abstract reasoning. Students will investigate relationships to develop equations of straight lines in analytic geometry, explore relationships between volume and surface area of objects in measurement, and apply extended numeric and algebraic skills in problem solving. Students will engage in abstract extensions of core learning that will deepen their mathematical knowledge and enrich their understanding.

This Grade 9 mathematics course is designed to develop students' proficiency as learners and thinkers in mathematics, and their ability to apply mathematics in their daily lives. Students will interpret, analyze and create mathematical models to solve realistic problems, within and beyond the mathematics classroom.

Course Outline: Unit Titles

Number Sense and Numeracy
 Powers and Roots
 Ratio, Rate and Percent
 Algebraic Operations and Equations
 Statistics
 Relations
 Slope and Line
 Geometry
 Measurement

Applied Grade 9 Math (MFM1P)

Course Description:

This course enables students to develop mathematical ideas and methods through the exploration of applications, the effective use of technology, and extended experiences with hands-on activities. Students will investigate relationships of straight lines in analytic geometry, solve problems involving the measurement of two-dimensional figures and three-dimensional objects, and apply key numeric and algebraic skills in problem solving. Students will also have opportunities to consolidate core skills and deepen their understanding of key mathematical concepts.

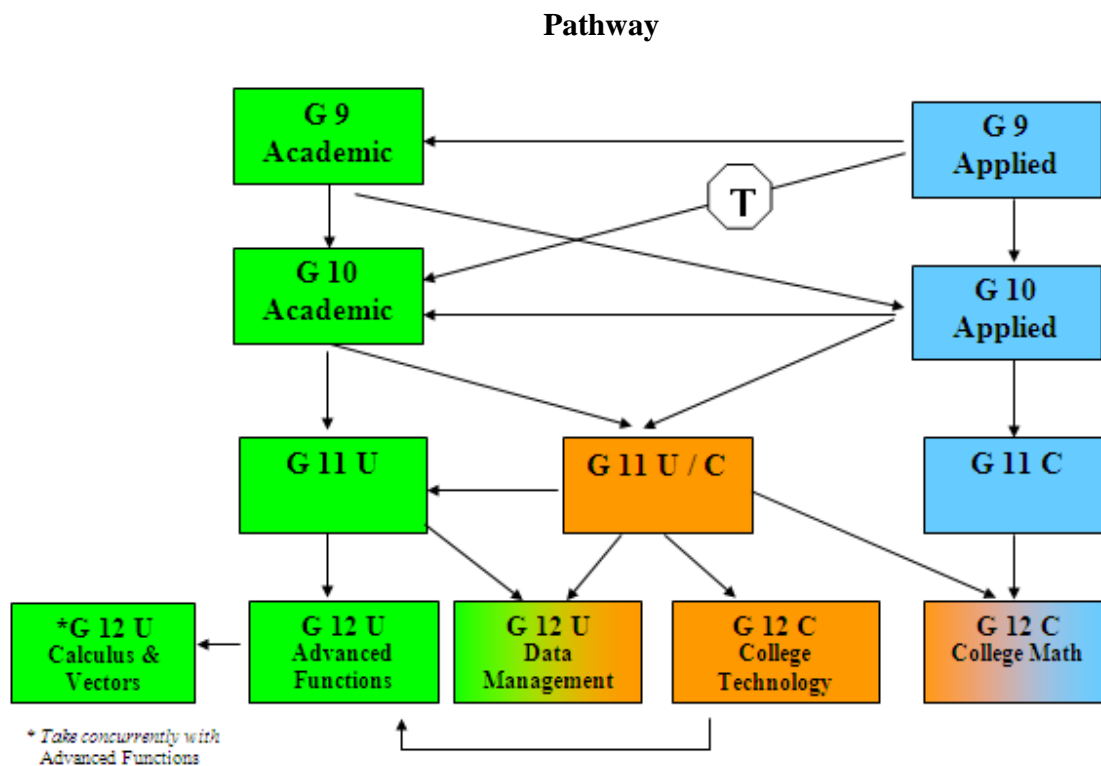
This Grade 9 mathematics course is designed to develop students' proficiency as learners and thinkers in mathematics, and their ability to apply mathematics in their daily lives. Students will interpret, analyze, and create mathematical models to solve realistic problems, within and beyond the mathematics classroom.

Course Outline: Unit Titles

Number Sense and Numeracy
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Academic Grade 9 versus Applied Grade 9 Math

- Differ in the balance between theory and application
- Academic covers more essential concepts
- Pre-requisite for different streams



Academic Grade 9 Enriched Math (MPM1D3)

Same course description as Academic Grade 9 Math (MPM1D) with more in depth discussions as time permits.

Students who are interested in taking the **Enriched Math Program** must apply (online, <http://ntci.on.ca>) to the program after they have received acceptance to the school. The screening process will involve the submission of the mid-term Grade 8 math marks and the **writing of the placement test on March 8, 2012**. (See page 3 for more information)

Students who do well in the Grade 9 enriched program and in the Waterloo Pascal (Grade 9) Math contest will be eligible to the G10 enriched program.

2. Assessment and Evaluation Policy

Quizzes
 Tests
 Performance Tasks
 Assignments
 December Exam
 EQAO Assessments
 Final Exam

3. Technology Applications

Graphing Calculator

Software

- Graphmatica
- GeoGebra

4. Enrichment Opportunities

Students who love mathematics challenges should

- participate in various math contests:
 - Grade 9 Pascal Math Contest (Multiple Choice)
 - Grade 9 Fryer Math Contest (Problem Solving, Full Solution)
- join the math club.

5. Math Club

NT Math Club offers math tutoring to students at lunch, five days a week. Teachers and peer tutors provide expert assistance when needed. Computers are available for student to work on Math and Computer Science projects. Besides tutoring, club members also play games, puzzles, solve challenging problems and explore topics that are not usually covered in the high school curriculum.

6. The Grade 9 Enriched Math Placement Test

If you would like to enroll in the Grade 9 enriched math program after receiving the acceptance notice from our school in February, please register for the Grade 9 enriched math placement test on the web:

Who can register for the test?	Only those who have received acceptance from North Toronto
When to apply?	Immediately after you has received acceptance and before the registration deadline (March 1)
How to apply?	Register online at http://www.ntci.on.ca (school website) Enter the following information: 1) Last Name First Name 2) Email address 3) Telephone number 4) Home School (your present Grade 8 school)
Deadline of registration	Thursday, March 1, 4:00 p.m.
Testing date and time	Thursday, March 8: from 3:45 p.m. to 5:00 p.m.
Test Location	North Toronto C.I. , 4 th floor, Rm 422, 423 & 424
What to bring?	<ul style="list-style-type: none"> • A photocopy of your most recent Grade 8 report card with the mathematics mark and the average of all subjects • Pencils and eraser • NO CALCULATOR
How to prepare for the eligibility test?	<ul style="list-style-type: none"> • Grade 8 math curriculum • University of Waterloo Gauss Grade 7 & 8 Math Contests http://cemc.math.uwaterloo.ca/contests/gauss.html