

Grade 11 MATHEMATICS COURSES

To graduate, a student must have 3 credits in mathematics, with one of the credits at the grade 11 or 12 level. There are four different grade 11 mathematics courses.

Gr. 11 Workplace Preparation Mathematics (MEL3E): *Mathematics for Everyday Life*

- < students may take this course after any Grade 9 Mathematics course, including Essentials.
- < includes topics that are useful in a variety of jobs and in managing many aspects of adult life.
- < designed to meet the needs of students who have experienced difficulties in learning mathematics in the past

Gr. 11 College Preparation Mathematics (MBF 3C): *Mathematics of Personal Finance*

- < students may take this course as a prerequisite for Gr. 12 College & Apprenticeship Mathematics
- < Students might choose this as their last high school math course if they plan to study programs at College that do not require Gr. 12 mathematics.

Gr. 11 University/College Preparation Mathematics (MCF 3M): *Functions*

- < is focused on the 3 topics required for success in Gr. 12 Calculus and Grade 12 Mathematics of Data Management
- < allows more time to explore new concepts, solve problems and consolidate skills in preparation for Gr. 12 Calculus
- < leads into all Grade 12 math courses except Gr. 12 U MGA
- < the majority of university-bound students or students planning to study technology at College are expected to take this course.

Gr. 11 University Preparation Mathematics (MCR 3U): *Functions and Relations*

- < is focused on the 3 topics required for success in Gr. 12 Calculus as well as a 4th topic leading to Gr. 12 Geometry and Discrete Mathematics.
- < moves at a greater pace to accommodate the 4th unit, allowing less time to consolidate skills.
- < leads into all Grade 12 math courses including Gr. 12 U MGA
- < designed for students who have demonstrated significant strength in mathematics
- < a small minority of university-bound students would choose this course.

A Comparison of Gr. 11 University/College Math (MCF 3M) and University Math (MCR 3U)

Gr. 11 U/C Topics	Gr. 11 University Topics
Financial Applications of Sequence & Series	Financial Applications of Sequence & Series
Trigonometric Functions	Trigonometric Functions
Tools for Operating with Functions	Tools for Operating with Functions
	Investigations in Loci and Conics

Common content required for success in Gr. 12 MCB 4U, MDM 4U, MGA 4U, and MCT 4C

Differentiated time given to:

- * contexts
- * interesting applications based on destinations
- * time to explore and develop understandings
- * time to consolidate and practise skills
- * time to diagnose, identify and remediate weaknesses

Additional topic in preparation for success in Gr. 12 MGA 4U leading to a math-focused destination

UNIVERSITY PREPARATION COURSES:

Gr. 12 University Math:(MGA 4U) - Geometry and Discrete Mathematics

This course is designed for students with a high level of achievement in mathematics who are pursuing a career with a heavy focus on mathematics at university.

Gr. 12 University Math: (MCB 4U) Advanced Functions & Introductory Calculus

This course is designed for students planning to enter a university program that requires highschool calculus for admission.

Gr. 12 University Math: (MDM 4U) Mathematics of Data Management

This course is designed for students planning to enter university in a program that may require a statistics course at some point.

Sample University Programs and the Grade 12 Mathematics Courses they may require:

Mathematical Focus	University Program (only a few examples of possible programs are listed.)	MGA 4U (Geometry & Discrete Math)	MCB 4U (Functions & Calculus)	MDM 4U (Data Management)
A heavy focus on mathematics	Engineering	T	T	
	Mathematics (Pure & Applied)	T	T	
	Chemistry	T	T	
	Physics	T	T	
Some focus on mathematics	Business		T and	or T
	Economics		T and	or T
	Geography (Physical)		T and	or T
	Kinesiology		T and	or T
Statistical Analysis involved in the program	Psychology			T
	Sociology			T
	Elementary Teacher Education			T

University Courses that have NO Grade 12 mathematics prerequisites:

Many University courses do not require mathematics for entry into the program. Sometimes, a mathematics course at the grade 12 level is recommended, but not required.

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|---------------|--------------|-------------|
| T English | T Philosophy | T Fine Arts |
| T Law | T Journalism | T History |
| T Social Work | T Languages | T Theology |

MATHEMATICS COURSES

COLLEGE PREPARATION COURSES:

Gr. 12 College Math: (MCT 4C) - Mathematics for College Technology

Take this course as a prerequisite for these Community College courses:

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|-----------------------------------|-------------------------------------|
| T Computer Engineering Technology | T Electrical Engineering Technician |
| T Electronic Engineering | T Computer Programmer |
| T Computer Analyst | T Computer Systems Technician |
| T Manufacturing Engineer | T Manufacturing Technician |
| T Science Lab Technician | T Civil Engineering Technology |
| T Architectural Technology | |

Gr. 12 College Math: (MAP 4C) - College and Apprenticeship* Mathematics

Take this course as a prerequisite for these Community College Courses:

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|---------------------------------------|--|
| T Accounting | T Marketing |
| T Financial Services | T Graphic Design |
| T Construction Engineering Technician | T Interior Design |
| T Food & Beverage Management | T Fashion Design |
| T Dental Assistant | T Medical Radiation Technology |
| T Paramedic | T Pharmacy Assistant |
| T Respiratory Therapy | T Horticultural and Landscape Technician |

* Many apprenticeships require that students study courses at college that may include mathematics.

Community College Courses that have NO Grade 12 Mathematics prerequisites:

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|-----------------------------------|--|
| T Law Clerk | T Broadcasting |
| T Radio | T Television |
| T Fine Art | T Food and Beverage Management |
| T Office Administration | T Theatre Arts |
| T Child & Youth Worker | T Early Childhood Education |
| T Law and Security Administration | T Horticultural & Landscape Technician |
| T Travel & Tourism | T Hotel Management |

WORKPLACE PREPARATION COURSES:

Grade 12 Workplace Mathematics: (MEL 4E) - Mathematics for Everyday Life

This course prepares students to enter the workplace with a broader understanding of mathematics as it is applied in day-to-day living.

- < topics studied include statistics, probability, accommodation costs, household budgets, estimation and geometry used in design.
- < students planning to enter the workforce directly after highschool and with no plans of future post secondary education might choose this course.

*Note: This material has been obtained from information available at December 2000 from the 2003 Course Calendar from Fanshawe College and information from the University of Western Ontario. This information is designed as **an introductory guide only**. Check with your guidance counsellor to obtain current information about specific courses and their requirements.*