

## GRADE 12 APPLIED MATHEMATICS COURSE OUTLINE



**Term 4: April 4, 2022 – June 8, 2022**

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**Final Exam: Wed, 8 June**

We live in a rapidly changing world. Mathematics is playing more and more a role in our everyday lives. A firm foundation in mathematics is now an essential part of living in today's fast - paced society. On this Grade 12 Applied Mathematics course you will learn several of the key skills needed for an increasingly technological world.

Grade 12 Applied Mathematics is intended for students considering any science related post-secondary studies that do not require a study of theoretical calculus. It is context-driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. Technology is an integral part of both learning and assessment in Applied Mathematics. Graphing calculators, spreadsheets, or other computer software will be used continually by students for mathematical explorations, modelling, and problem solving.

### Topics

Unit Label	Subject	Class Hours
A	Probability	15
B	Personal Finance	14
C	Functions	20
D	Statistics	12
E	Permutations and Combinations	14
F	Sinusoidal Functions	15
G	Design and Measurement	20
H	Research Project	0
	Total	110 hrs

**On-Time.** Notice that 110 hours is necessary for this course. This is a quick paced course! Disruption of your class through late arrivals too frequently does not promote effective learning. Late arrivals and extended breaks just complicate timely delivery of the course.

**Extra Assistance.** I am more than readily available at short notice for any and all students for additional assistance provided they are industrious and earnest. Ample additional support is available on the course website at: [mrfteach.mb.ca/wp](http://mrfteach.mb.ca/wp)

**Computer Lab/ Programs.** No special programs are required for the course. There is limited access to computers. Use of Mathematics-related Apps on personal devices is encouraged (except for tests and final exam)

**Attendance.** Attendance and tardiness are recorded daily and processed by the office and funding agencies. Making up missed work and notes is your responsibility. There is more than sufficient means to readily locate what you have missed.

**Supplemental Materials / Equipment:** A scientific calculator is required; the calculators with the 50 to 100 different functions. A \$14 - \$20 calculator that features **Multi-Line Display** or equivalent is especially desirable. A phone or tablet is highly desirable for this course. Teacher will instruct you on suitable Math Apps you might download to your mobile device.

**Textbook.** There is no text book for the course. Each unit has its own prepared set of class notes and workbooks for students to interact with.

**Assessment and Evaluation.** Assessment is based on Homework, weekly Thursday Quizzes, Mid-Terms Test and a Final Exam. This particular Applied Course is not subject to the Provincial Exam process.

Item	Approx. Weight Factor
Homework (~ 20 Assignments)	25%
Thursday Quizzes ( ~ x 6)	30%
Mid-Term Test (x 1)	15%
Final Exam (x 1)	25%
Study Notes (Cheat Sheet)	5%

**Lates.** There will be approximately 20 (+/-) assignments; often they will be done in class. Assignments that are seven or more days late from the due date will likely be subject to a maximum mark of 50%. Missing a weekly quiz may be subject to considerable penalty as well.

**Food/Drink.** Food is not permitted in the classroom. Drinks are permitted provided they have a secure lid.

**Cell Phones and Related Devices.** Use of social media / texting is **not permitted** in class. Silence it, store it away (vibrate in pocket) and check it at the break. There will be occasional opportunity to use Mathematics-related Apps in class as specifically directed.

**Emergencies / Office Number.** Reception is at 953-2800. It will be useful to share this number with child care facilities and immediate family for emergencies only.

**Study Notes.** You are required to make a single sheet of study notes ('Cheat Sheet') and revise it throughout the course. The single sheet of study notes is allowed on all quizzes and tests and the **Final Exam**. Composing and revising your thoughts onto a single sheet of paper is a very powerful way to learn.

**Conclusion.** We are all in this together. It will be a lot of work for all of us, myself included. But I am prepared to deliver to you a great Grade 12 Applied Mathematics course with your eager and enthusiastic participation.

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Date

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Instructor