



MDM4U Data Management Grade 12, University Preparation

General Course Information

Prerequisite:	MCR 3U, MCF 3M
Teacher:	416-396-6793 Ext 20458
Department:	Mathematics
Extra Help:	After In-Class time or an Online Tutorial planned with your teacher
Textbook and Replacement Cost:	n/a
Required Materials:	binder, paper, scientific calculator, ruler, pencil, eraser, graph paper

Course Description

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing and analysing large amounts of information; solve problems involving probability and statistics; and carry out a culminating investigation that integrates statistical concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. Students planning to enter university programs in business, the social sciences, and the humanities will find this course of particular interest.

<http://www.edu.gov.on.ca/eng/curriculum/secondary/math1112curr.pdf>

Assessment and Evaluation

To promote student success, ongoing assessment and feedback will be given regularly to the students. A variety of assessment and evaluation strategies will be used in this course, including tests, quizzes, group work, and presentations. Expectations will be evaluated based on the provincial curriculum expectations and the achievement levels outlined in the ministry document.

Expectations are organized into four categories. The categories and their corresponding weighting is as follows:

Knowledge and Understanding	25%	Thinking	10%
Application	25%	Communication	10%

Each student's final mark will be in the form of a percentage grade based on their achievement in the 4 categories on the achievement chart. The breakdown of the final mark is as followed:

Term Evaluation	70%	Final Culminating Activity	30%
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The final Evaluation will be completed during the final 6 weeks of the course and may include a variety of summative activities including an exam, a presentation, a seminar, or an essay or another writing assignment.

In addition to students' performance in the achievement categories, students will also be assessed on their performance in the following learning skills:

Responsibility	Organization	Independent Work
Collaboration	Initiative	Self-Regulation

For specific policies on assessment and evaluation, and academic honesty, please refer to *Code of Conduct*.

The course is organized into the following strands:

COUNTING AND PROBABILITY

- solve problems involving the probability of an event or a combination of events for discrete sample spaces;
- solve problems involving the application of permutations and combinations to determine the probability of an event.

PROBABILITY DISTRIBUTIONS

- demonstrate an understanding of discrete probability distributions, represent them numerically, graphically, and algebraically, determine expected values, and solve related problems from a variety of applications;
- demonstrate an understanding of continuous probability distributions, make connections to discrete probability distributions, determine standard deviations, describe key features of the normal distribution, and solve related problems from a variety of applications.

ORGANIZATION OF DATA FOR ANALYSIS

- demonstrate an understanding of the role of data in statistical studies and the variability inherent in data, and distinguish different types of data;
- describe the characteristics of a good sample, some sampling techniques, and principles of primary data collection, and collect and organize data to solve a problem.



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STATISTICAL ANALYSIS

- analyse, interpret, and draw conclusions from one-variable data using numerical and graphical summaries;
- analyse, interpret, and draw conclusions from two-variable data using numerical, graphical, and algebraic summaries;
- demonstrate an understanding of the applications of data management used by the media and the advertising industry and in various occupations.

CULMINATING DATA MANAGEMENT INVESTIGATION

- design and carry out a culminating investigation that requires the integration and application of the knowledge and skills related to the expectations of this course;
- communicate the findings of a culminating investigation and provide constructive critiques of the investigations of others.