St. Charles College  
Evaluation Policy  
Grade 12 Mathematics  
Data Management - MDM4U

**Prerequisite:** Grade 11-Functions and Applications, Grade 11-University/College Preparation  
**Credit Value:** 1 credit  
**Textbook:** Data Management Nelson ($75.00)

**Course Description:** The Grade 12 university preparation course Mathematics of Data Management is designed to satisfy the prerequisites for a number of university programs that may include statistics courses, such as those found in the social sciences and the humanities. The Counting and Probability strand extends the basic probability concepts learned in the elementary school program and introduces counting techniques such as the use of permutations and combinations; these techniques are applied to both counting and probability problems. The Probability Distributions strand introduces the concept of probability distributions; these include the normal distribution, which is important in the study of statistics. In the Organization of Data for Analysis strand, students examine, use, and develop methods for organizing large amounts of data, while in the Statistical Analysis strand, students investigate and develop an understanding of powerful concepts used to analyse and interpret large amounts of data. These concepts are developed with the use of technological tools such as spreadsheets and Fathom, a ministry-licensed dynamic statistical program. The Culminating Data Management Investigation strand requires students to undertake a culminating investigation dealing with a significant issue that will require the application of the skills from the other strands of the course.

**Units of Study: Course Expectations:** By the end of the course students will be able to:

• 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.

• 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.

• 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.

• 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.

• 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.
Throughout this course we will also be developing the following Catholic Graduate Expectations.

- presents information and ideas clearly and honestly and with sensitivity to others.
- creates, adapts, evaluates new ideas in light of the common good.
- demonstrates flexibility and adaptability.
- works effectively as an interdependent team member.
- accepts accountability for one's own actions.

**Evaluation:** Term 70%
Summative Assessment = Project 17%
Exam 13%
(Note: all students are required to write the final exam.)

**Calculations of Marks**
Knowledge and Understanding 30%
Thinking and Inquiry 10%
Communication 10%
Application 20%
Summative Assessment 30%

* A student whose achievement is below 50% at the end of the course will not obtain a credit for the course.

**Classroom Procedures:**

**Attendance**
Regular attendance on the part of students is vital to the learning process. Students are encouraged to attend class every day. When the process and content of learning are disrupted by irregular attendance, this usually reflected in the student's achievement level. Attendance is reported on the report card and will be evaluated as a learning skill. If there appears to be an unacceptable number of days absent a “Cautionary Letter” will be sent home with the student.

**Late Assignments**
Students will hand in all assignments by the established due date. This can be accomplished by using good “time management” skills. Use the student agenda book to record all assigned work. In the case of exceptional circumstance, the student must consult with the teacher before the due date.

**Missed Tests**
Students who are absent for a test should make up the test on the first day they return.

**Homework**
Homework will be recorded on the report card as a learning skill. Completing class work to the best of your ability is an integral part of the program. It is essential to get extra help as soon as possible if you encounter difficulties.

**Notebooks**
Notebooks are an important record of the year's work. It is mandatory that students keep an organized notebook and the following guidelines should be followed.

- Each lesson must be dated and have a title
- Handouts must be dated
- All notes and handouts must be kept in chronological order
- Tests and Quizzes must be corrected

**Teaching and Assessment Strategies**
The following strategies will be used to evaluate student work:

- Unit tests
- Quizzes
- Assignments
- Exam