

## COURSE INFORMATION SHEET

**DATE:** SEPTEMBER , 2007  
**SECONDARY SCHOOL:** Brebeuf College School  
**DEPARTMENT HEAD:** Mr. Michael Daoust  
**TEACHER:** Mr.G.Sturino  
**DEPARTMENT:** Mathematics



<b>CURRICULUM POLICY DOCUMENT</b>		The Ontario Curriculum Grade 12 Ontario Ministry of Education, 2000	
<b>COURSE TITLE</b>	<b>Mathematics of Data Management, Grade 12, University Preparation</b>	<b>COURSE CODE</b>	MDM 4U1
<b>PRE-REQUISITE</b>	Functions, Grade 11 Functions & Relations, Grade 11	<b>GRADE &amp; TYPE</b>	12 Open
<b>FULL YEAR / SEMESTER</b>	Semester	<b>CREDIT VALUE</b>	1

### COURSE DESCRIPTION (AS SPECIFIED IN MINISTRY OF EDUCATION POLICY DOCUMENT)

This course broadens students' understanding of mathematics as it relates to managing information. Students will apply methods for organizing large amounts of information; apply counting techniques, probability, and statistics in modelling and solving problems; and carry out a culminating project that integrates the expectations of the course and encourages perseverance and independence. Students planning to pursue university programs in business, the social sciences, or the humanities will find this course of particular interest.

### LISTED IN ORDER OF INSTRUCTIONAL DELIVERY

<b>STRAND / UNIT TITLES</b>	<b>HOURS</b>	<b>OVERALL EXPECTATIONS / UNIT DESCRIPTION</b>
<b>ORGANIZATION OF DATA FOR ANALYSIS</b>	21	<b>ODV.01</b> · organize data to facilitate manipulation and retrieval; <b>ODV.02</b> · solve problems involving complex relationships, with the aid of diagrams; <b>ODV.03</b> · model situations and solve problems involving large amounts of information, using matrices.
<b>COUNTING and PROBABILITY</b>	20	<b>CPV.01</b> · solve counting problems and clearly communicate the results; <b>CPV.02</b> · determine and interpret theoretical probabilities, using combinatorial techniques; <b>CPV.03</b> · design and carry out simulations to estimate probabilities.
<b>STATISTICS</b>	44	<b>STV.01</b> · demonstrate an understanding of standard techniques for collecting data; <b>STV.02</b> · analyse data involving one variable, using a variety of techniques; <b>STV.03</b> · solve problems involving the normal distribution; <b>STV.04</b> · describe the relationship between two variables by interpreting the correlation coefficient;

		<b>STV.05</b> · evaluate the validity of statistics drawn from a variety of sources.
<b>INTEGRATION OF THE TECHNIQUES OF DATA MANAGEMENT</b>	<b>26</b>	<b>DMV.01</b> · carry out a culminating project on a topic or issue of significance that requires the integration and application of the expectations of the course; <b>DMV.02</b> · present a project to an audience and critique the projects of others.

<b>STUDENT EVALUATION CRITERIA</b>					
<b>TERM – 70%</b>			<b>FINAL – 30%</b>		<b>FINAL REPORT CARD GRADE CALCULATION – 100%</b>
<b>10 ≤ RELATIVE EMPHASIS / WEIGHTING ≤ 40</b>			<b>RELATIVE EMPHASIS / WEIGHTING</b>		<b>TERM TOTAL + FINAL TOTAL = REPORT CARD MARK</b>
<b>KNOWLEDGE/UNDERSTANDING</b>	20		Exam	30	
<b>INQUIRY/THINKING</b>	20				
<b>COMMUNICATION</b>	10				
<b>APPLICATION</b>	20				
<b>TERM TOTAL</b>	<b>70</b>		<b>FINAL TOTAL</b>	<b>30</b>	

<b>ASSESSMENT FORMAT USED</b>					
<b>WRITTEN</b>		<b>PERFORMANCE</b>		<b>OTHER</b>	
Culminating Report		Oral Presentations		Teacher Observation	
Short Answer		Investigations		Conferencing	
Multiple Choice		Projects		Use of Technology	
Essay/Journal		Concept Mapping		Skills Checklist	
Papers/Reports		Group Work			
		Chapter Problems			

<b>RESOURCES (EXAMPLES PROVIDED)</b>	
<b>TEXTBOOK</b>	Nelson Publishers: “Mathematics of Data Management”
<b>STUDENT MATERIALS</b>	Handouts, Graphing Calculators, Excel Spreadsheet, List of Relevant Internet Sites, Course Evaluation Summary.
<b>EXCURSIONS</b>	
<b>COMPUTER USE</b>	At home use -- Internet and Spreadsheet
<b>COURSE RELATED WEBSITES</b>	Statcan.ca

<b>POLICIES &amp; PROCEDURES (EXAMPLES PROVIDED)</b>	
<b>PLAGIARISM</b>	First offence: Deduction of 15% of the value of the assignment. Second offence: A mark of zero for the assignment.
<b>LATE ASSIGNMENTS</b>	Loss of 15% per day late.
<b>MISSED WORK</b>	Students are responsible to obtain all missed work from their teacher and/or classmate.
<b>ABSENCES</b>	Unless accompanied by a doctor's/parent/guardian note, all absences will be considered as skips.
<b>HOMEWORK</b>	All assigned work must be done neatly, complete and on time.
<b>TEACHER CONTACTS</b>	Mr. M. De Thomasis
<b>EXTRA HELP</b>	Seek help from your teacher/classmates/guidance dep't immediately as soon as a difficulty may occur. (Academic or otherwise)
<b>REPORTING DATES</b>	Timelines need to be following especially with regards to the culminating project and oral presentation dates.

<b>LEARNING SKILLS CRITERIA</b>	
<b>IN EACH REPORTING PERIOD, REPORT ON THE QUALITY OF THE LEARNING SKILLS DEMONSTRATED BY THE STUDENT IN EACH OF THE CATEGORIES IDENTIFIED ON THE REPORT CARD USING THE FOLLOWING LETTER SYMBOLS.</b>	
<b>E-EXCELLENT</b>	<b>G-GOOD</b> <b>S-SATISFACTORY</b> <b>N-NEEDS IMPROVEMENT</b>
<b>SKILL: WORKS INDEPENDENTLY</b>	
<b>INDICATORS:</b>	
<ul style="list-style-type: none"> <li>• accomplishes tasks independently</li> <li>• accepts responsibility for completing tasks</li> <li>• follows instructions</li> <li>• regularly completes assignments on time and with care</li> <li>• demonstrates self-direction in learning</li> <li>• independently selects, evaluates, and uses appropriate learning materials, resources, and activities</li> </ul>	<ul style="list-style-type: none"> <li>• demonstrates persistence in bringing tasks to completion</li> <li>• uses time effectively</li> <li>• uses prior knowledge and experience to solve problems and make decisions</li> <li>• reflects on learning experiences</li> </ul>
<b>SKILL: ORGANIZATION</b>	
<b>INDICATORS:</b>	
<ul style="list-style-type: none"> <li>• organizes work when faced with a number of tasks</li> <li>• devises and follows a coherent plan to complete a task</li> <li>• follows specific steps to reach goals or to make improvements</li> <li>• revises steps and strategies when necessary to achieve a goal</li> </ul>	<ul style="list-style-type: none"> <li>• manages and uses time effectively and creatively</li> <li>• demonstrates ability to organize and manage information</li> <li>• follows an effective process for inquiry and research</li> <li>• uses appropriate information technologies to organize information and tasks</li> </ul>
<b>SKILL: INITIATIVE</b>	
<b>INDICATORS:</b>	
<ul style="list-style-type: none"> <li>• seeks out new opportunities for learning</li> <li>• responds to challenges and takes risks</li> <li>• demonstrates interest and curiosity about concepts, objects, events, and resources</li> <li>• seeks necessary and additional information in print, electronic, and media resources</li> <li>• identifies problems to solve, conducts investigations, and generates questions for further inquiry</li> <li>• requires little prompting to complete a task, displaying self-motivation and self-direction</li> </ul>	<ul style="list-style-type: none"> <li>• approaches new learning situations with confidence and a positive attitude</li> <li>• develops original ideas and devises innovative procedures</li> <li>• attempts a variety of learning activities</li> <li>• seeks assistance when needed</li> <li>• uses information technologies in creative ways to improve learning for self or others</li> </ul>
<b>SKILL: TEAMWORK</b>	
<b>INDICATORS:</b>	
<ul style="list-style-type: none"> <li>• works willingly and cooperatively with others</li> <li>• shares resources, materials, and equipment with others</li> <li>• responds and is sensitive to the needs and welfare of others</li> </ul>	<ul style="list-style-type: none"> <li>• questions the ideas of the group to seek clarification, test thinking, or reach agreement</li> <li>• shows respect for the ideas and opinions of others in the</li> </ul>

<ul style="list-style-type: none"> <li>• solves problems collaboratively</li> <li>• accepts various roles, including leadership roles</li> <li>• takes responsibility for his or her own share of the work to be done</li> <li>• works to help achieve the goals of the group or the class</li> <li>• helps to motivate others, encouraging them to participate</li> <li>• contributes information and ideas to solve problems and make decisions</li> </ul>	<p>group or class</p> <ul style="list-style-type: none"> <li>• listens attentively, without interrupting</li> <li>• in discussions, paraphrases points of view and asks questions to clarify meaning and promote understanding</li> <li>• recognizes the contribution of group members by means of encouragement, support, or praise</li> <li>• seeks consensus and negotiates agreement before making decisions</li> </ul>
<p><b>SKILL: WORK HABITS/HOMEWORK</b></p> <p><b>INDICATORS:</b></p>	
<ul style="list-style-type: none"> <li>• completes homework on time and with care</li> <li>• puts forth consistent effort</li> <li>• follows directions</li> <li>• shows attention to detail</li> <li>• uses materials and equipment effectively</li> </ul>	<ul style="list-style-type: none"> <li>• begins work promptly and uses time effectively</li> <li>• perseveres with complex projects that require sustained effort</li> <li>• applies effective study practices</li> </ul>

**NOTE:** The above chart is a reformatting of the skills identified in the Ministry of Education's *Guide to the Provincial Report Card, Grades 9 – 12 : Appendix C: pages 27 to 29* .