Course of Study : Mathematics of Data Management
Grade 12, University Preparation
MDM4U

Academic Year: 2019-2020	*Teacher Name: P. Kent*	
Department:: Mathematics	*Department Head: S. Burtch*	
Date developed: June 23/09	*Revised:June 2017*	
Course Title	Data Management	**Course Code**	MDM4U
Prerequisite	Functions, Grade 11, University Preparation, or Functions and Applications, Grade 11, University/College Preparation	**Grade**	12/ 5th year
Level	University	**Credit Value**	1.0

Course Description
Ontario Ministry of Education Document: **The Ontario Curriculum, Grades 11 and 12**   **Mathematics Revised 2007**
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.

Textbook: Mathematics of Data Management - McGrawHill

Instructional Strands/Units		
Strand/Unit Titles	*Approx. Time Spent*	*Overall Expectations/Unit Description*
COUNTING AND PROBABILITY	20 periods	By the end of this course, students will: 1. solve problems involving the probability of an event or a combination of events for discrete sample spaces; 2. solve problems involving the application of permutations and combinations to determine the probability of an event.
PROBABILITY DISTRIBUTIONS	20 periods	By the end of this course, students will: 1. 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; 2. 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	20 periods	By the end of this course, students will: 1. demonstrate an understanding of the role of data in statistical studies and the variability inherent in data, and distinguish different types of data; 2. 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.

STATISTICAL ANALYSIS	20 periods	By the end of this course, students will: 1. analyse, interpret, and draw conclusions from one-variable data using numerical and graphical summaries; 2. analyse, interpret, and draw conclusions from two-variable data using numerical, graphical, and algebraic summaries; 3. 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	Ongoing throughout the course	By the end of this course, students will: 1. 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; 2. communicate the findings of a culminating investigation and provide constructive critiques of the investigations of others.

Student Evaluation Criteria			
Term Work		**Culminating Activities**	
Categories			
Knowledge/Understanding	20%	Project	15%
Thinking	15%	Exam	15%
Communication	15%		
Application	20%		
Term Total 70%		*Culminating Activity Total 30%*	

	First Report	Second Report	Interim Report	Final Report
Report Cards	Nov 24, 2017	Feb 13, 2018	Apr 19, 2018	Jun 28, 2018
Parent/Teacher Interviews	Nov 30, 2017	Feb 15, 2018		

Assessment of Learning Skills

The 6 learning skills: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self Regulation, will be assessed using a variety of techniques including, but not limited to, homework checks, group work/research, class involvement, cooperative activities and independent work

Assessment and Evaluation Tools		
Knowledge/Understanding	*Thinking and Application*	*Communication*
Quizzes	Investigations	Discussions
Tests	Projects	Participation
In-Class Assignments	Problem Solving	Written and oral communication of mathematical ideas
Homework	Real-World Applications	
	Explorations	
	Word Problems	

Communication	
Parents	*Contact the Math department at 393-1780 ext. 20038*
Students	*Contact your teacher in person Check your googleclassroom site*
Extra help	*Mornings 8-8:30 Lunch Tues and Thur Or please make an arrangement with me*
School Website	*http://schools.tdsb.on.ca/OakwoodCI*

Success Plan

1. **Come to class every day, on time, with a pencil, eraser, ruler , scientific calculator and binder.**
2. **Listen to, and participate in, the lesson.**
3. **Complete the work assigned in class.**
4. **Ask for help when you need it.**
5. **Help your classmates.**
6. **Complete all evaluations to the best of your ability.**

Textbooks

If students are issued a textbook for use during the school year, they are expected to bring it to class each period. Replacement cost $80

Evaluation

Evaluation takes a balanced approach (see above) to the 4 categories of achievement (K/U, T, C, A) and blends these so that most evaluation tasks include 2 or more of the categories. For purposes of simplification, the final mark will be calculated as follows:

Course Work, including: Tests, Assignments, etc.   *70%*
(K/U, T, C, A)

Culminating Activities (incl. Final Exam)   *30 %*
(K/U, T, C, A)

Teachers will communicate to students the approximate value of assignments and their placement in the evaluation chart.

Attendance, Punctuality and Work Habits

It is expected that students arrive punctually to all classes and that attendance is regular. When students are absent, it is the responsibility of the student to find out what was missed. This should be done at an appropriate time such as before school on the date of return. Students are not to disrupt the learning of others by catching up on missed work during class. This includes requests for missed/lost handouts. All such matters should be dealt with before class commences.

Homework will be assigned on a regular basis. Students are expected to demonstrate initiative and self-direction in their approach to homework. Failure to do homework will adversely affect a student's ability to achieve high marks.

Class Website

Students are expected to regularly check the Google Classroom site for this course for posted assignments and resources. Students are encouraged to use the included calendar as an organizational tool to help ensure that all timelines are met.
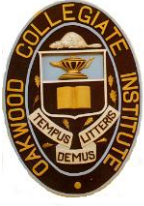
Coursework – Tests, Assignments, etc.

Students are expected to write tests/quizzes on the set date. Students must make arrangements with the teacher in advance of the test date if they know that they will be away. In such cases, the student is expected to make arrangements with their teacher to make up the missed evaluation. If students are absent for an officially recognized excuse, they must present documentation and the teacher will set a date for an alternative test to be written.

Assignments – each assignment has a due date. Assignments are due at the start of the period on the due date, unless otherwise specified. Late assignments will be accepted until the ultimate due date. This is usually the date on which marked assignments are returned. After this date, assignments may not be submitted and the student will receive a zero. Teachers may use a variety of techniques to encourage students to submit late work. This may include, if necessary, a mark reduction of 10%.

Exams and Culminating Activities

Exams and culminating evaluations must be completed on the assigned date. It is usually not possible to reschedule these evaluations or to provide alternative assignments. Therefore a mark of zero will be assigned unless suitable documentation (medical certificate, etc.) is received. In such cases, the teacher, in consultation with colleagues and the administration, will determine an appropriate mark.

Course:

Teacher: P. Kent

Please acknowledge that you have read this outline:

Date:	**Parent Signature**
Date:	**Student Signature**

Please return this to your teacher before the end of the week.