

SOUTH CARLETON HIGH SCHOOL

Ottawa-Carleton District School Board

STUDENT OUTLINE**MDM4U****MATHEMATICS OF DATA MANAGEMENT****UNIVERSITY**

Credit Value: 1 credit

Hours: 110

Prerequisite: MCF3M/MCR3U

Expectations

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 modeling 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.

Course Expectations

Strand	Overall Expectations
Organization of Data for Analysis	Organize data to facilitate manipulation and retrieval; solve problems involving complex relationships, using diagrams; model situations and solve problems (large amounts of information), using matrices.
Counting and Probability	Solve counting problems and clearly communicate the results; determine and interpret theoretical probabilities (combinatorial techniques); design and carry out simulations to estimate probabilities.
Statistics	Demonstrate an understanding of standard techniques for collecting data; analyze data (one variable), using a variety of techniques; solve problems involving the normal distribution; describe the relationship between two variables (interpret the correlation coefficient); and evaluate the validity of statistics from a variety of sources.
Integration of the Techniques of Data Management	Carry out a culminating project on a topic of significance that requires the integration and application of the expectations of the course; present a project to an audience and critique the projects of others.

Accommodations for Exceptional Students

The Mathematics department makes every effort to accommodate the identified needs of exceptional (IPRC'd) students and will attempt to differentiate curriculum delivery methods, student modes of expression, and assessment methods as recommended by the student's individual education plan (IEP).

Career Planning

The Mathematics department makes every effort to ensure students are aware of career opportunities related to various fields of Mathematics. In particular, the teacher will help the student to be aware of "real world" applications of the topics presented in this course.

Technology and Textbooks

Students will have the opportunity to use available software in Mathematics appropriate to the course including software packages: Graphing calculators, E-Stat, Excel, Fathom. Graphing calculators will also be available to the students.

Calculator Each student requires a **scientific calculator** that will be used on a daily basis. Graphing calculators will be supplied when required.

Resources **Mathematics of Data Management** McGraw-Hill Ryerson

Evaluation

Term reports	Final Report	
Students will be evaluated on the overall expectations listed above. Evaluations will cover a balance of Knowledge & Understanding, Application, Communication, Thinking, Inquiry and Problem Solving.	Term	70%
	Culminating Project	10%
	Final Exam **	20%
		100%
<i>Student assessment and evaluation will be based on the Achievement Chart from the Ministry curriculum documents.</i>	<i>** will evaluate whole term's work</i>	

More information on South Carleton High School's policy on Assessment and Evaluation and on Academic Integrity can be accessed on our school website.

Please see **Student Planner** for policies on punctuality, absenteeism and examinations, and other student responsibilities.