SOUTH CARLETON HIGH SCHOOL
Ottawa-Carleton District School Board
STUDENT OUTLINE
MCF3M
FUNCTIONS and APPLICATIONS
UNIVERSITY/COLLEGE 11

Credit Value: 1 credit | Hours: 110 | Prerequisite: MPM2D/MFM2P

Expectations

This course introduces basic features of the function by extending students' experiences with quadratic relations. It focuses on quadratic, trigonometric, and exponential functions and their use in modeling real-world situations. Students will represent functions numerically, graphically, and algebraically; simplify expressions; solve equations; and solve problems relating to applications. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Course Expectations

Strand	Overall Expectations
Quadratic Functions	Expand/simplify quadratic expressions; solve quadratic equations; relate roots of equations to graphs; functions and the connection between numeric, graphical and algebraic representations of quadratic functions
Exponential Functions	Simplify, evaluate and make connections between numeric, algebraic and graphical representations of exponential functions; identify and represent exponential functions; solve problems with real-world applications; understand compound interest, annuities and solve problems
Trigonometric Functions	Solve problems with acute triangles using sine and cosine laws; periodic relationships; sine function- including numeric, graphical and algebraic representations, problems involving real-world applications

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 the software package Geometer's Sketchpad. Graphing calculators will also be available to the students.

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

Resources ***Functions and Applications 11***, Nelson

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 Summative task* Final Exam **	70% 10% 20% **100%**
Assessment tools include tests/quizzes, assignments, performance tasks and rich assessment tasks	** in-class task towards the end of term* *** will evaluate whole term's work*	

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.