

SOUTH CARLETON HIGH SCHOOL

Ottawa-Carleton District School Board

STUDENT OUTLINE

MCT4C

MATHEMATICS FOR COLLEGE TECHNOLOGY 12

COLLEGE

Credit Value: 1 credit

Hours: 110

Prerequisite: MCF3M

Expectations

This course equips students with the mathematical knowledge and skills they need into college technology programmes. Students will investigate and apply properties of polynomial, exponential, and logarithmic functions; solve problems involving inverse proportionality; and explore the properties of reciprocal functions. They will also analyze models of a variety of functions, solve problems involving piecewise-defined functions, solve linear-quadratic systems, and consolidate key manipulation and communication skills.

Course Expectations

Strand	Overall Expectations
Polynomial Functions and Inverse Proportionality	Determine through investigation, the characteristics of the graphs of polynomial functions of various degrees; demonstrate facility in the algebraic manipulation of polynomials, an understanding of inverse proportionality; and determine, through investigation, the key properties of reciprocal functions.
Exponential and Logarithmic Functions	Demonstrate an understanding of the nature of exponential growth and decay; define and apply logarithmic functions
Applications and Consolidation	Analyze models of linear, quadratic, polynomial, exponential, or trigonometric functions from a variety of applications; analyze and interpret models of piecewise-defined functions from a variety of applications; solve linear-quadratic systems and interpret their solutions within the contexts of applications; demonstrate facility in carrying out and applying key manipulations skills.

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: Zap-a-Graph, MathTrek and 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 **Mathematics for College Technology 12**, Addison Wesley

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.	<table> <tr> <td>Term</td> <td>70%</td> </tr> <tr> <td>Summative Evaluation</td> <td>10%</td> </tr> <tr> <td>Final Exam **</td> <td><u>20%</u></td> </tr> <tr> <td></td> <td>100%</td> </tr> </table>	Term	70%	Summative Evaluation	10%	Final Exam **	<u>20%</u>		100%
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	100%								
<i>Assessment tools include tests/quizzes, assignments, performance tasks and rich assessment tasks</i>	<p>* in-class task towards the end of term ** will evaluate whole term's work</p>								

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.