

HALIBURTON HIGHLANDS SECONDARY SCHOOL



Mathematics Evaluation Policy for Grade 11 University Mathematics



Course Code: MCR 3U

Level: Grade 11 University

Credit Value: 1.0

Teacher Contact Information:

Teacher: 705-457-2950

Course Description:

This course introduces the mathematical concept of the function by extending students' experiences with linear and quadratic relations. Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions; represent functions numerically, algebraically, and graphically; solve problems involving applications of functions; investigate inverse functions; and develop facility in determining equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: MPM 2D

Strands of Study and Overall Expectations include:

A. Characteristics of Functions

- A1. demonstrate an understanding of functions, their representations, and their inverses, and make connections between the algebraic and graphical representations of functions using transformations;
- A2. determine the zeros and the maximum or minimum of a quadratic function, and solve problems involving quadratic functions, including problems arising from real-world applications;
- A3. demonstrate an understanding of equivalence as it relates to simplifying polynomial, radical, and rational expressions.

B. Exponential Functions

- B1. evaluate powers with rational exponents, simplify expressions containing exponents, and describe properties of exponential functions represented in a variety of ways;
- B2. make connections between the numeric, graphical, and algebraic representations of exponential functions;
- B3. identify and represent exponential functions, and solve problems involving exponential functions, including problems arising from real-world applications.

C. Discrete Functions

- C1. demonstrate an understanding of recursive sequences, represent recursive sequences in a variety of ways, and make connections to Pascal's triangle;
- C2. demonstrate an understanding of the relationships involved in arithmetic and geometric sequences and series, and solve related problems;
- C3. make connections between sequences, series, and financial applications, and solve problems involving compound interest and ordinary annuities.

D. Trigonometric Functions

- D1. determine the values of the trigonometric ratios for angles less than 360° ; prove simple trigonometric identities; and solve problems using the primary trigonometric ratios, the sine law, and the cosine law;
- D2. demonstrate an understanding of periodic relationships and sinusoidal functions, and make connections between the numeric, graphical, and algebraic representations of sinusoidal functions;
- D3. identify and represent sinusoidal functions, and solve problems involving sinusoidal functions, including problems arising from real-world applications.

Efforts will be made to meet the individual learning needs of students in order to ensure these expectations are being met.

Course Outline / Units of Study:

<ol style="list-style-type: none"> 1. Introduction to Functions 2. Equivalent Algebraic Expressions 3. Quadratic Functions 4. Exponential Functions 	<ol style="list-style-type: none"> 5. Trigonometric Ratios 6. Sinusoidal Functions 7. Sequence and Series 8. Financial Applications 								
<p>Evaluation Structure:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding: 5px;">Knowledge/Understanding</td> <td style="text-align: right; padding: 5px;">20%</td> </tr> <tr> <td style="padding: 5px;">Thinking/Inquiry</td> <td style="text-align: right; padding: 5px;">15%</td> </tr> <tr> <td style="padding: 5px;">Communication</td> <td style="text-align: right; padding: 5px;">15%</td> </tr> <tr> <td style="padding: 5px;">Application</td> <td style="text-align: right; padding: 5px;">20%</td> </tr> </table> <p>The above is reflected both in the term work (worth 70% of the final mark) and the final exam (worth 30% of the final mark).</p>	Knowledge/Understanding	20%	Thinking/Inquiry	15%	Communication	15%	Application	20%	<p>Resources:</p> <p>Textbook: Functions 11</p> <p>Policy Document: The Ontario Curriculum Grades 11& 12 Foundations for College Mathematics 11 - 2007</p>
Knowledge/Understanding	20%								
Thinking/Inquiry	15%								
Communication	15%								
Application	20%								

Evaluation:
Students will be assessed & evaluated according to the work produced & skills displayed. Methods of providing feedback will include assessing work in process & evaluating completed assignments, tests, co-operative learning activities, simulations and presentations. Peer & self-evaluations will also be utilized.
Student marks will be determined by evaluating process & product according to 4 categories & 4 levels. Please see the chart below for specific skills and key words used to determine student competency in the different categories.

Category	Level 1: 50-59%	Level 2: 60-69%	Level 3: 70-79%	Level 4: 80-100%
<p>Knowledge/Understanding</p> <ul style="list-style-type: none"> ➤ Knowledge of facts & terms ➤ Understanding of concepts & relationships 	Limited display of knowledge, skills and ability to apply concepts	Some success in displaying knowledge, skills and application of concepts	Considerable display of knowledge skills and ability to apply concepts	Thorough understanding of concepts and ability to communicate, think creatively and apply concepts
<p>Thinking/Inquiry</p> <ul style="list-style-type: none"> ➤ Critical thinking skills ➤ Creative thinking skills ➤ Inquiry Skills 				
<p>Communication</p> <ul style="list-style-type: none"> ➤ Communication of ideas & information ➤ Use of symbols & form ➤ Oral & written communication 				
<p>Application</p> <ul style="list-style-type: none"> ➤ Applications in familiar contexts ➤ Transfer of concepts to new contexts ➤ Making logical conclusions and predictions ➤ Use of technology ➤ Making connections 				

Learning Skills: Students are expected to reflect the following skills throughout the course:

Responsibility:	Fulfils responsibilities. Completes & submits work ON TIME. Manages own behaviour.
Organization:	Devises & follows a plan. Establishes priorities & manages time. Uses resources to complete tasks.
Independent Work:	Monitors, assesses & revises plans to complete tasks & meet goals. Uses class time wisely. Follows instructions with minimal supervision.
Collaboration:	Accepts various roles in a group. Responds positively to ideas, opinions of others. Builds healthy peer relationships. Resolves conflict and builds consensus. Shares resources and promotes critical thinking to solve problems and make decisions.
Initiative:	Looks for and acts on new ideas. Innovative and takes risks. Demonstrates curiosity and an interest in learning. Approaches new tasks with a positive attitude. Advocates for all appropriately.
Self-Regulation:	Sets goals. Seeks help when needed. Reflects on own strengths, needs & interests. Identifies learning opportunities, choices and strategies. Perseveres and makes an effort when responding to challenges.

Students will receive the following letter grades: **E** - Excellent **G** - Good **S** - Satisfactory **N** - Needs Improvement

HALIBURTON HIGHLANDS SECONDARY SCHOOL

COURSE EXPECTATIONS AND EVALUATION POLICY



Welcome to MCR 3U.

Attendance

Regular attendance is essential for academic success in school. It is the student's responsibility to inform the teacher beforehand of any planned absences. It is the student's responsibility to get notes assignments and any other information missed while absent from class. This should be done on the student's first day back, either during class, lunch hour or after school. **Any student that is truant the last three days of a semester will not be allowed to write his/her final examination.**

Tests

Students must be prepared to write tests on the assigned day. Students who miss a test for no valid reason will receive a mark of zero. Any student who knows that he/she will be absent for a valid reason during a test must make arrangements with the teacher before the period in which the test is to be written. Students who miss a test for any reason should be prepared to write the test on the first day back at school or should make suitable arrangements with the teacher on the first day back.

Assignments

If a student is absent on the day work is assigned, it is his/her responsibility to get the assignment from the teacher. If a student is absent when an assignment is collected, it is to be submitted at the beginning of the period on the first day back.

Late Assignment Policy "Not Done is not Acceptable"

Please adhere to our new HHSS Late Assignment Policy. Students received this in their period one class on the first day of the semester.

Plagiarism

Plagiarism is the act of taking someone else's ideas or writing and passing it off as your own. Whatever material students consult in the preparation of essays/projects should be properly credited to the writer or source. Material may be quoted if the student identifies it as a quotation and cites the author. Copying another student's work is cheating, and is also called plagiarism. **A first offense may result in a mark of zero or an opportunity to redo/resubmit the evaluation, after consultation with the student, parent, teacher, department head and school administrator. A second offense will result in a mark of zero, a call home and the student will be referred to the Principal. A third offense will result in a mark of zero and may result in an in-school suspension.**

Computers are tools for education; not entertainment devices. Students who are not on task may have their computer account disabled for the remainder of the day (or longer.)

I hereby acknowledge that I am fully aware of the expectations and evaluation in the **MCR 3U** course.

Student Signature: _____ **Parent's/Guardian Signature:** _____

Should it be necessary to contact you about your child's progress, it would be helpful if you would provide the appropriate information below:

Parent(s)/Guardian(s):

_____ Phone: (H) _____ (W) _____

E-mail: _____

_____ Phone: (H) _____ (W) _____

E-mail: _____

For students 18 years of age and over or who will turn 18 during the course:

I give permission for my teacher to contact my parents/guardians with regard to this course: