



COURSE STANDARDS AND PROCEDURES

COURSE: Math 426

CLASS RESOURCES: Math Help Services and MHS interactive workbook, Teacher notes, in-class handouts, Google Classroom

COURSE DESCRIPTION: Scientific Math course that is a pre-requisite for math 506. Student needs a 75% average in sec 3 to be enrolled in this course.

MYP AIMS ADDRESSED BY THE COURSE: What are the aims/objectives of the course? How do these relate to the MEES competencies?

- Enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- Develop an understanding of the principles and nature of mathematics
- Communicate clearly and confidently in a variety of contexts
- Develop logical, critical, and creative thinking

MYP Course Aims	MEES Course Objectives
<ul style="list-style-type: none">- Knowing and understanding- Investigating patterns- Communicating- Applying mathematics in real-life contexts	TERM 1 Topic 1 –Algebra <ul style="list-style-type: none">• Concept/properties of equivalent figures• Equivalent algebraic expressions• Multiplying algebraic expressions• Division of polynomials• Algebraic identities• Factoring polynomials• Rational expressions• Solving 2nd degree equations with one variable
<ul style="list-style-type: none">- Knowing and understanding- Investigating patterns- Communicating- Applying mathematics in real-life contexts	TERM 2 Topic 2 – 2nd degree function <ul style="list-style-type: none">• Properties of various families of functions• Greatest integer function• Transformed greatest integer function• Quadratic function – Patterns and properties• Quadratic function – Standard form• Parameters of a function• Quadratic function – General form• Role of parameters a, b and c• Zeros of the quadratic function• Quadratic function – Factored form

	<ul style="list-style-type: none"> • Solving a 2nd degree inequality with one variable • Inequalities with a quadratic function <p>Topic 3 - Statistics</p> <ul style="list-style-type: none"> • Two-variable distribution • Contingency table • Scatter plot • Describing a qualitative correlation • Linear correlation coefficient • Regression line and its equation • Interpolating and extrapolating
<ul style="list-style-type: none"> -Knowing and understanding -Investigating patterns -Communicating -Applying mathematics in real-life contexts 	<p>TERM 3</p> <p>Topic 4 – Analytic Geometry</p> <ul style="list-style-type: none"> • Distance between two points • Slope of a line • Equation of a line in all 3 forms: Function, general, symmetric • Solving systems of equations: By comparison, by substitution, by elimination • Special systems of equations: No solution, 1 solution, 2 solutions • System of two equations – linear and quadratic • Inequalities in two variables • Solving inequalities in two variables • Half-planes <p>Topic 5 – Geometric reasoning/proofs</p> <ul style="list-style-type: none"> • Developing and communicating a proof • Congruent triangles • Similar triangles • Metric relations in right triangles <p>Topic 6 – Trigonometry</p> <ul style="list-style-type: none"> • Trigonometric relations (SohCahToa) • Sine law • Cosine law • Area of a triangle <p>Click here to enter text.</p>

KEY INSTRUCTIONAL STRATEGIES/APPROACHES TO LEARNING:

Which ATLs will be addressed in the course and how?

Critical thinking skills

- Analyzing and evaluating issues and ideas
- Practice observing carefully in order to recognize problems
- Gather and organize relevant information to formulate an argument
- Practice visible thinking strategies and techniques
- Utilizing skills and knowledge in multiple contexts
- Apply skills and knowledge in unfamiliar situations
- Transfer current knowledge to learning of new technologies

How will the content be delivered to the students?

- Warm up questions, discussions allow students to reflect on previous classes concepts and learning experiences.
- Demonstrate proper mathematical notation within explanation of concepts.
- Formative assessments (pop quizzes, quizzes, homework assignments)
- Group discussions when faced with unfamiliar situations; students discuss appropriate strategies and situations.
- Students combine and apply their mathematical knowledge when solving summative Situational Problems.

IB MYP LEARNER PROFILE: Identify which profile attributes will be addressed in the course and how.

- Critical thinker, inquirer, communicators, caring [Click here to enter text.](#)

FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:

Term 1 (20% of School Course Grade)		
<i>Competencies targeted</i>	<i>Evaluation methods</i>	<i>Timeline</i>
C1: Uses Mathematical Reasoning C2: Solves a Situational Problem	- Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem	Sept 1, 2023 – Nov 3, 2023
<i>Communication to students and parents</i>	<i>Materials required</i>	
Click here to enter text. <ul style="list-style-type: none">• Progress Report• Report card• Communication on an as needed basis.• Mozaik parent portal• Google Classroom	<ul style="list-style-type: none">• Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations• Ruler, pencils, and eraser• Scientific calculator• Internet Access (Outside of the classroom: Home/Library/etc)	

<i>IB MYP Criterion</i>	<i>Examples of assessment/feedback both formative and/or summative</i>
<p><i>A: Knowing and understanding</i></p> <p><i>B: Investigating patterns</i></p> <p><i>C: Communicating</i></p> <p><i>D: Applying mathematics in real-life contexts</i></p>	<ul style="list-style-type: none"> - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem

Term 2 (20% of School Course Grade)		
<i>Competencies targeted</i>	<i>Evaluation methods</i>	<i>Timeline</i>
<p>C1: Uses Mathematical Reasoning</p> <p>C2: Solves a Situational Problem</p>	<ul style="list-style-type: none"> - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem 	<p>Nov 4, 2023- Jan 26, 2024</p>
<i>Communication to students and parents</i>	<i>Materials required</i>	
<ul style="list-style-type: none"> • Report card • Communication on an as needed basis. • Mozaik parent portal • Google Classroom 	<ul style="list-style-type: none"> • Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations • Ruler, pencils, and eraser • Scientific calculator • Internet Access (Outside of the classroom: Home/Library/etc) <p>Click here to enter text.</p>	
<i>IB MYP Criterion</i>	<i>Examples of assessment/feedback both formative and/or summative</i>	
<p><i>A: Knowing and understanding</i></p> <p><i>B: Investigating patterns</i></p> <p><i>C: Communicating</i></p> <p><i>D: Applying mathematics in real-life contexts</i></p>	<ul style="list-style-type: none"> - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem 	

Term 3 (60% of School Course Grade)		
<i>Competencies targeted</i>	<i>Evaluation methods</i>	<i>Timeline</i>
<p>C1: Uses Mathematical Reasoning</p> <p>C2: Solves a Situational Problem</p>	<ul style="list-style-type: none"> - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem 	<p>Jan 27, 2024- June 21, 2024</p>

<i>Communication to students and parents</i>	<i>Materials required</i>	
<ul style="list-style-type: none"> • Report card • Communication on an as needed basis. • Mozaik parent portal 	<ul style="list-style-type: none"> • Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations • Ruler, pencils, and eraser • Scientific calculator • Internet Access (Outside of the classroom: Home/Library/etc) <p>Click here to enter text.</p>	
<i>IB MYP Criterion</i>	<i>Examples of assessment/feedback both formative and/or summative</i>	
<p><i>A: Knowing and understanding</i> <i>B: Investigating patterns</i> <i>C: Communicating</i> <i>D: Applying mathematics in real-life contexts</i></p>	<ul style="list-style-type: none"> - Tests - Quizzes - Assignments/Pop-Quizzes - Situational Problem 	

Additional Information/Specifications

Click here to enter text.

- This course does not have a final exam. The final course grade comes entirely from the school course grade.
- This course has a final exam administered by the English Montreal School Board. The final course grade is determined by taking 70% of the school course grade and 30% of the school board exam.
- This course has a final exam administered by the *Ministère de l'Éducation et de l'Enseignement Supérieur* (MEES). The final course grade is determined by taking 50% of the Ministry Exam mark and 50% of the school course grade.