École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE:

Mathematics 506 Secondary 5 Math SN

CLASS RESOURCES: MHS Workbook, *Teacher notes, in-class handouts, Math Help Services, Google Classroom*

COURSE DESCRIPTION: Scientific math course that is a prerequisite for most commerce and science Cegep programs.

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

MYP Course Aims	MEES Course Objectives
• Knowing and understanding • Investigating patterns • Communicating • Applying mathematics in real-life contexts	**TERM 1** **Chapter 4 – Vectors** • Scalar quantity and vector quantity • Operations on functions and composition of functions • Vector • Vector projection • Relations between vectors • Addition and subtraction of vectors • Multiplication of a vector by a scalar • Properties of operations on vectors • Linear combinations • Scalar product of two vectors • Properties of a scalar product **Chapter 2 – Systems of Equations and Inequalities** Arithmetic and Algebra • Solving systems of equations • Inequalities in the 1st degree with two variables • System of inequalities • Polygon of constraints • Optimizing function • Optimal solutions • Linear programming and optimal solutions • Solving an optimization problem

MYP Course Aims	**MEES Course Objectives**
● Knowing and understanding ● Investigating patterns ● Communicating ● Applying mathematics in real-life contexts	**TERM 2** **Chapter 1 – Functions Arithmetic and Algebra** • Operations on functions and composition of functions • The role of parameters • Inverse function • Piecewise functions • Properties of radicals • Square root functions • Finding the rule and solving a square root function • Properties of absolute values • Absolute value functions • Finding the rule and solving an absolute value function • Rational functions • Finding the rule and solving a rational function **Chapter 3 – Exponential and Logarithmic Functions** • Exponential notation

	• Laws of exponents • Exponential function • Finding the rule of an exponential function • Logarithm • Logarithmic function • Finding the rule of a logarithmic function • Logarithmic equivalences • Solving an exponential equation • Solving a logarithmic equation • Solving an exponential inequality • Solving a logarithmic inequality
MYP Course Aims	**MEES Course Objectives**
● Knowing and understanding ● Investigating patterns ● Communicating ● Applying mathematics in real-life contexts	**TERM 3** **Chapter 5 – Trigonometric functions** • Radian • Unit circle • Periodic functions • Sinusoidal functions • Finding the rule of a sinusoidal function • Tangent functions • Finding the rule of a tangent function • Arcsine and arccosine functions • Arctangent functions • Solving a trigonometric equation • Solving a trigonometric inequality • Trigonometric identities • Formulas for the sum or difference of two angles **Chapter 6 – Conics** • Conic • Circle and finding its equation • Interior or exterior region of a circle • Ellipse and finding its equation • Interior or exterior region of an ellipse • Hyperbola and finding its equation • Interior or exterior region of a hyperbola • Parabola and finding its equation • Interior or exterior region of a parabola • Intersection points of a line and a conic or a parabola and another conic

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 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.

Communicators, Inquirers/Thinkers, Caring

FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:

<table>
<tr><th colspan="3">Term 1 (20% of School Course Grade)</th></tr>
<tr><td>Competencies targeted</td><td>Evaluation methods</td><td>Timeline</td></tr>
<tr><td>Competency 1: Solves a situational problem (30% of term grade)

Competency 2: Uses mathematical reasoning (70% of term grade)</td><td>May include but not limited to:
- Tests
- Quizzes
- Assignments/HW and Pop-Quizzes
- Situational Problem</td><td>Term 1:
Sept. 2, 2025 – Nov.6, 2025</td></tr>
<tr><td>Communication to students and parents</td><td colspan="2">Materials required</td></tr>
<tr><td>• Mozaik Parent Portal
• Progress Report
• First Term Report Card
• (communication on an as needed basis)</td><td colspan="2">• Notebook or lined paper, graph paper, binder for handouts and evaluations
• Ruler, pencils, and eraser
• Scientific calculator
• Internet Access (Outside of the classroom: Home/Library)</td></tr>
</table>

IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments - Situational Problem

Term 2 (20 % of School Course Grade)		
Competencies targeted	*Evaluation methods*	*Timeline*
Competency 1: Solves a situational problem (30% of term grade) Competency 2: Uses mathematical reasoning (70% of term grade)	May include but not limited to: - Tests - Quizzes - Assignments - Situational Problem	***Term 2:*** ***Nov. 7, 2025*** ***- Feb. 6, 2026***
Communication to students and parents	*Materials required*	
•Mozaik Parent Portal •Progress Report (April) •Second Term Report Card • (communication on an as needed basis)	• 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)	
IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*	
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments - Situational Problem	

Term 3 (60 % of School Course Grade)		
Competencies targeted	*Evaluation methods*	*Timeline*

Competency 1: Solves a situational problem (30% of term grade) Competency 2: Uses mathematical reasoning (70% of term grade)	May include but not limited to: - Tests - Quizzes - Assignments - Situational Problem -FINAL EXAM	***Term 3: Feb. 7, 2026*** ***June 17, 2026***
Communication to students and parents	*Materials required*	
•Mozaik Parent Portal •Progress Report (April) •Second Term Report Card • (communication on an as needed basis)	• 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)	
IB MYP Criterion	*Examples of assessment/feedback both formative and/or summative*	
A: Knowing and understanding B: Investigating patterns C: Communicating D: Applying mathematics in real-life contexts	- Tests - Quizzes - Assignments - Situational Problem	

Additional Information/Specifications

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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 20% 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 school course grade and 50% of the MEES exam. Please note that the final course grade is subject to MEEs moderation.