École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE: Mathematics 414 Secondary 4 Math CST

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

COURSE DESCRIPTION: Cultural, Social and Technical Math course that is a pre-requisite for Math 504

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
-Knowing and understanding -Investigating patterns -Communicating -Applying mathematics in real-life contexts	TERM 1 **Topic 1 – From lines to systems of equations** • Points and segments in Cartesian plane • Change on the axes • Slope of a Segment • Distance between two points • Mid-point/Division point • Equation of a line • Parallel and perpendicular lines • Systems of equations • Particular cases of systems of equations
-Knowing and understanding -Investigating patterns -Communicating	TERM 2 **Topic 2 – From functions to modeling** • Real functions • Families of functions and choosing a

-Applying mathematics in real-life contexts	model • Second-degree polynomial function • Exponential functions • Periodic function **Topic 3 – Statistical measures and linear correlation (continued in Term 3)** • Single-variable distribution • Two-variable distributions • Correlation • Contingency table • Scatter plot • Correlation coefficient • Interpreting a correlation • Factors in interpreting the correlation
-Knowing and understanding -Investigating patterns -Communicating -Applying mathematics in real-life contexts	**TERM 3** **Topic 4 – From Congruent to Similar Figures** • Congruent/Isometric triangles • Similar Triangles • Metric Relations in right triangles **Topic 5 – Trigonometry** • Trigonometric ratios • Solving a right triangle • Area of a triangle • Sine law • Hero's formula

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.

• Homework quizzes allow students to reflect on previous classes concepts and learning experiences.

• Demonstrate proper mathematical notation within explanation of concepts.

• Formative assessments (Homework quizzes, quizzes, tests)

• 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.

- Thinkers, helpers, communicators, hard workers, caring

FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:

<table>
<tr><th colspan="3">Term 1 (4 Term 1 (20% of School Course Grade)0% 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>- Tests
- Quizzes
- Homework quizzes
- Situational Problem</td><td>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>- Progress Report
- Report card</td><td colspan="2">• Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations
• Ruler, pencils, and eraser
• Scientific calculator</td></tr>
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- Communication on an as needed basis. - Mozaik parent portal - Google Classroom	• Internet Access (Outside of the classroom: Home/Library/etc.)
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 - Homework quizzes - Situational Problem

Ter	**Term 2 (20% of School Course Grade)m 2 (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)	- Tests - Quizzes - Homework Quizzes - Situational Problem	Nov 6, 2025- Feb 6, 2026
Communication to students and parents	*Materials required*	
- Report card - Communication on an as needed basis. - Mozaik parent portal - Google Classroom	• 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)	
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 - Homework quizzes - Situational Problem	

Term 3 (not app	**lTerm 3 (60% of School Course Grade)icable for the 2021-2022 school year)**	
Competencies targeted	*Evaluation methods*	*Timeline*
Competency 1: Solves a situational problem (30% of term grade)	- Tests - Quizzes - Homework quizzes - Situational Problem	Feb 6, 2026- June 17, 2026

Competency 2: Uses mathematical reasoning (70% of term grade)		
Communication to students and parents	*Materials required*	
- Report card - Communication on an as needed basis - Mozaik parent portal - Google Classroom	• 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)	
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 - Homework Quizzes - Situational Problem	

AdditionAdditional Inf Additional Information/Specificationstion/Specificationsal

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