École Secondaire LAURIER MACDONALD High School
7355 Viau, Saint-Leonard H1S 3C2
Tel: 514-374-6000 Fax: 514-374-7220

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* *-Applying mathematics in real-life contexts*	TERM 2 **Topic 2 – From functions to modeling** • Real functions • Families of functions and choosing a 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* • Congruent/isometric triangles • Similar triangles • Metric relations in right triangles	**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:

Term 1 (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	- Tests - Quizzes - Homework quizzes - Situational Problem	Sept 1, 2023 – Nov 2, 2023
Communication to students and parents	*Materials required*	
Click here to enter text. ● Progress Report • 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 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)	- Tests - Quizzes - Homework Quizzes - Situational Problem	Nov 3, 2023- Feb 2, 2024
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 (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	Feb 3, 2023- June 21, 2023
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	

Additional Information/Specifications
☐ 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.