



**École Secondaire LAURIER MACDONALD High School**

**7355 Viau, Saint-Leonard  H1S 3C2**

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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 3000 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 – Statistical measures and linear correlation** • Single-variable distribution • Two-variable distributions • Correlation • Contingency table • Scatter plot • Correlation coefficient • Interpreting a correlation • Factors in interpreting the correlation  **Topic 3 – From functions to modeling**    • Real functions • Families of functions and choosing a model • Second-degree polynomial function  • Exponential functions • Periodic function |
| -*Knowing and understanding*  *-Investigating patterns*  *-Communicating*  *-Applying mathematics in real-life contexts* | **TERM 3**  **Topic 4 – 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, 2022 –  Nov 3, 2022 |
| *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 4, 2022-  Feb 3, 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 | |

| **Term 3 (60% of School Course Grade)** | | |
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| *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 4, 2023-  June 22, 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** |
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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 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). For this year only, the final course grade is determined by taking 20% of the Ministry Exam mark and 80% of the school course grade. |