École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE:

Mathematics 504 Secondary 5 Math CST

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

COURSE DESCRIPTION:

Secondary 5 Math CST

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** **Chapter 1 - Graph Theory** • Tree diagrams and networks • Graph • Connected graph • Complete graph • Paths • Circuits • Trees • Directed graph • Weighted graph • Path of minimum value • Tree of minimum value • Chromatic number • Critical path
- Knowing and Understanding - Investigating patterns - Communicating - Applying mathematics in real life contexts	**TERM 2** **Chapter 2 - Systems of Equations and Inequalities** • Solving systems of equations

	• Inequalities in the 1st degree with two variables • System of inequalities • Polygon of constraints • The optimizing function • Optimal solutions • Linear programming and optimal solutions • Solving an optimization problem **Chapter 3 – Financial Mathematics** • Exponential notation • Laws of exponents • Logarithm (definition and change of base) • Interest rates • Interest period • Discounting • Compounding
- Knowing and Understanding - Investigating patterns - Communicating - Applying mathematics in real life contexts	**<u>TERM 3</u>** **Chapter 4: Social theory - Voting Procedures** - Voting Procedures - Majority rule and plurality voting - Borda count, condorcet method, elimination method and approval voting - Majority election **Chapter 5: Equivalent Figures and Cosine Law** - Cosine Law - Area of a Figure - Volume of a Solid - Equivalent Lines - Equivalent plane figures - Equivalent solids - Comparing equivalent plane figures and solids **Chapter 6: Probability** - Randon Experiment - Probability of an event

	- Theoretical, experimental and subjective probability - Odds for and against - Math Expectation - Conditional Probability - Fairness - Mutually exclusive and non-mutually exclusive events - Independent and dependent events

FUNDAMENTAL IB CONCEPTS: Identify the MYP fundamental concepts (communication, intercultural awareness and holistic learning) specific to the subject and explain how they will be incorporated.

- Concepts: Form, Relationships, Logic
- How: Providing concrete examples

KEY INSTRUCTIONAL STRATEGIES/APPROACHES TO LEARNING: Which ATLs will be addressed in the course and how? How will the content be delivered to the students?

<u>Which ATLs will be addressed in the course and how?</u>

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

<u>How will the content be delivered to the students?</u>

- Warm up questions, discussions allow students to reflect on previous class 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.

- Attributes: Communicators, Inquirers/Thinkers, Caring, Hard workers
  How:
- Teaching focused on effective teamwork and collaboration
- Teaching through inquiry
- Teaching differentiated to meet the needs of all learners

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)	May include but not limited to: - Tests - Quizzes - Homework quizzes - Situational Problem	Sept 2, 2025 – Nov 6, 2025
Communication to students and parents	*Materials required*	
- Mozaik Parent Portal - Progress Report - 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 - 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)	May include but not limited to: - Tests - Quizzes - Homework Quizzes	Nov 6, 2025-

Competency 2: Uses mathematical reasoning (70% of term grade)	- Situational Problem	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 - 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)	May include but not limited to: - Tests - Quizzes - Homework Quizzes - Situational Problem - FINAL EXAM	Feb 6, 2026- June 17, 2026
Communication to students and parents	*Materials required*	
- Mozaik Parent Portal - Third 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	- Tests - Quizzes	

C: Communicating D: Applying mathematics in real-life contexts	- 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 school course grade and 50% of the MEES exam. Please note that the final course grade is subject to MEEs moderation.