École Secondaire LAURIER MACDONALD High School
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COURSE STANDARDS AND PROCEDURES

COURSE:

Differential Calculus, 566574

CLASS RESOURCES:

Teacher notes

COURSE DESCRIPTION:

This course aims to cover the topics of precalculus and differential calculus, including but not limited to functions, limits and continuity, differentiation and the use of derivatives to analyze functions.

Students should have a fundamental understanding of algebra and the properties of functions to master the course. Although no textbook is used, ample materials will be provided through google classroom for the students' benefit.

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	Term 1: -Factoring Methods of factorization Polynomial factorization of a degree higher than 3 -Properties of functions Rational function Radical function Composite and inverse functions
- Knowing and Understanding - Investigating patterns - Communicating - Applying mathematics in real life	Term 2: -Limits and continuity Estimating limits One sided limits Limits of composite functions Limits by factoring Squeeze theorem Continuity Infinite limits
- Knowing and Understanding - Investigating patterns - Communicating - Applying mathematics in real life	Term 3: -Differentiation Basic derivative rules Power rule Differentiating polynomials Differentiating multiple types of functions Differentiating products and quotients Differentiating composite, implicit and inverse functions

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.

Concept include Form, Relationships, and Logic by 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?

Thinking skills will be used by analyzing and evaluating different learning situations and problems. Students will be expected to practice thinking strategies and techniques based on knowledge provided in class.

Transfer skills will be used by applying the knowledge and skills they've accumulated through high school mathematics to new learning situations.

Content will be delivered to students via printed notes, which will also be posted online. Homework assignments will allow students to reflect on their knowledge.

IB MYP LEARNER PROFILE: Identify which profile attributes will be addressed in the course and how.

Attributes: Communicators, Inquirers and Thinkers

Students will further develop these attributes in the use of group work. Students will be asked to complete work on their own and with their classmates before getting answers from teacher. Teaching will be differentiated for the variety of learners.

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

Competency 2: Uses mathematical reasoning</td><td>May include but not limited to:
Tests
Quizzes
Homework assignments</td><td>September 2nd – November 6th, 2025</td></tr>
<tr><td>Communication to students and parents</td><td colspan="2">Materials required</td></tr>
<tr><td>Mozaik Parent Portal and Google Classroom
Progress Report
Report Card
Email communication (on an as needed basis)</td><td colspan="2">Notebook or lined paper
Binder
Ruler, pencils, and eraser
Scientific calculator
Internet Access (Outside of the classroom: Home/Library)</td></tr>
<tr><td>IB MYP Criterion</td><td colspan="2">Examples of assessment/feedback both formative and/or summative</td></tr>
<tr><td>A: Knowing and understanding
B: Investigating patterns
C: Communicating
D: Applying mathematics in real-life contexts</td><td colspan="2">Tests
Quizzes
Homework assignments</td></tr>
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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	May include but not limited to: - Tests Quizzes Homework assignments	November 7th - February 6th, 2026
Communication to students and parents	*Materials required*	
Mozaik Parent Portal and Google Classroom Report Card Email communication (on an as needed basis)	Notebook or lined paper Binder 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 assignments	

Term 3 (60% of School Course Grade)		
Competencies targeted	*Evaluation methods*	*Timeline*
Competency 1: Solves a situational problem Competency 2: Uses mathematical reasoning	May include but not limited to: - Tests Quizzes Homework assignments	February 9th - June 17th, 2026
Communication to students and parents	*Materials required*	
Mozaik Parent Portal and Google Classroom Report Card Email communication (on an as needed basis)	Notebook or lined paper Binder 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 assignments	

Additional Information/Specifications
Click here to enter text. ☐ 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.