



Course: HL Mathematics Year 2 2018-2019

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Course Description/Overview: IB Mathematics HL Year 2 is a Calculus 1 and 2 course designed for students who have a strong interest in advanced math and enjoy meeting its challenges and engaging with its problems. Topics in this course include, but are not limited to, differential calculus, integration, vectors, complex numbers, limits, probability and statistical distributions, and mathematical induction. Students will also need to complete a math exploration paper and conclude the year with three IB exams that encompass content from both HL1 and HL2.

Required Materials: Students must have:

1. A 3 ringed binder or notebook and folder.
2. Pencils or pens. Multiple colors are recommended.
3. Ti-84 Plus Calculator.

Course Units:

Quarter 1

- Unit 1: Derivative Basics
- Unit 2: Applications of Derivatives

Quarter 2

- Unit 3: Anti-Derivative Basics, Applications of Integration
- Unit 4: Advanced Integration Techniques

Quarter 3

- Unit 5: Limits, Continuity, Differential Equations
- Unit 6: Series and Sums

Quarter 4

- Unit 7: Exam Review, HL Year 1
- Unit 8: Exam Review, HL Year 2

Summative Assessments: Each of the eight units will include a two day (one non-calculator and one with calculator) summative exam. Each quarter will conclude with retake opportunities of the summative exams (see “retake” category on the next page). Students will also turn in a math investigation as an Internal Assessment requirement for the IB curriculum. The Internal Assessment will be due January 28, 2019.

Grading: The primary purpose is to communicate the academic achievement status of students to students, their families, employers, and post-secondary institutions. The grade should accurately reflect what students know and are able to do in the course. Consequently student performance on summative assessments will largely determine their grade. *Grading modifications may be made for students with IEP or 504 plans.*

Grading Scale and Make Up:

Grade on 8 point rubric	Descriptor	Letter Grade
7-8 (87.5-100%)	Exceeds Expectations	A
6-7 (75-87.5%)	Meets Expectations	B
5-6 (62.5-75%)	Mostly Meets Expectations	C
4-5 (50-62.5%)	Evidence of Basic Understanding	D
3-4 (37.5-50%)	Despite attempt, does not meet basics of learning target(s)	F

- **Summative Assessments: 80%**
- **Formative Quizzes, Assigned Homework, and Class Participation: 20%**

Evaluating Assigned Homework and Class Participation: Students with high marks in this category consistently exhibit the following:

- On task and focused while in class
- Persevere through challenges
- Collaborate with peers, ask for help when needed, and assist others
- Thoroughly attempt all assigned problems by the due date
- Show/explain work that demonstrates conceptual understanding (not just memorization)

Missing & Late Work: Teachers will set all due dates and deadlines. Teachers will separate the due date from the deadline in order to increase opportunities for students to complete assignments.

Extra Credit: No extra credit is offered.

Re-Learning and Retakes: During the last week of each quarter, students are allowed to retake any two of the four exams taken in the quarter with a maximum possible score of 7.2/8. The following steps are required prior to any retake:

- Mistakes on the initial exam must be corrected with sufficient work included.
- Skipped problems from the initial exam must be correctly completed.
- Additional practice and/or preparation as prescribed by the teacher.