

IB Mathematics SL Syllabus

Mr. McCorkle (Room 134)

Course Overview

IB Math SL is a 2-year course that is part of the IB Diploma Program. During Year 1 we will be covering 4 math topics: Algebra, Functions and Equations, Circular Functions and Trigonometry, and Statistics and Probability. During Year 2 you will cover Vectors and Calculus. During Year 2 you will also be writing a paper of 6-12 pages on an exploration of a math topic of your choice.

If you are part of the Diploma Program, at the end of Year 2 you will also sit for two end-of-course exams (External Assessments). The grade for IB (not your transcript grade) will be calculated with the following weights: Internal Assessment (20%), External Assessment Part 1 (40%), and External Assessment Part 2 (40%).

Course Objectives

By the end of the school year you will be able to demonstrate a good understanding of the principles, processes, and vocabulary related to the following areas:

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| 1. Math fundamentals. | 6. Triangle trigonometry. |
| 2. Functions and equations. | 7. Statistics. |
| 3. Sequences and series. | 8. Probability. |
| 4. Exponential and logarithmic functions. | 9. Probability Distributions. |
| 5. Trigonometric functions and equations. | |

In additions you will be able to demonstrate your ability to:

1. Read, interpret, and solve problems using appropriate mathematical terms.
2. Organize and represent information in tabular, graphical, and diagrammatic forms.
3. Know and use appropriate notations and terminology.
4. Formulate a mathematical argument and communicate it clearly.
5. Select and use appropriate mathematical strategies and techniques.
6. Demonstrate an understanding of both the significance and the reasonableness of results.
7. Recognize patterns and structures in a variety of situations and make generalizations.
8. Recognize and demonstrate an understanding of the practical applications of mathematics.
9. Use appropriate technological devices as mathematical tools.
10. Demonstrate an understanding and the appropriate use of mathematical modeling.

Required Texts and Materials

Text: Garry, Tim, and Ibrahim Wazir. *Mathematics: standard level: developed specifically for the IB diploma*. Harlow, Essex: Pearson Education Limited, 2008. Print.

Materials:

- Paper: I recommend that you have a 3-ring binder with loose leaf paper for this class. Inside that binder there should be a separate section for notes and homework. This will help keep you organized and help to make things easy when turning in your week's assignments.
- Pencil
- Texas Instruments TI-83+ or TI-84+

Classroom Rules and Expectations

1. Follow the classroom rules and expectations as posted and discussed in class.
2. Be on time to class:
To be on time for class you must be in your seat, with your materials, ready to go when the bell rings.
With your materials means you must have 5 things out and ready to go:
 1. Book
 2. Homework
 3. Paper
 4. Pencil
 5. Calculator
3. If absent, it is your responsibility to find out what you missed.

IB Learner Profile

The aim of all IB programs is to develop internationally minded people who strive to be:

1. Inquirers
2. Knowledgeable
3. Thinkers
4. Communicators
5. Principled
6. Open-minded
7. Caring
8. Risk-Takers
9. Balanced
10. Reflective

Because of this, I will not be up in front of class telling you how to do things as much as I will be guiding you to learn how to understand the concepts on your own, or with your classmates. This math course will require much more reading than your previous math courses. Please do not skim over the material. The changes in vocabulary and notation from your previous courses to this course are great and will be vital to your success in this class.

Grades

Grades will be determined by a weighted average of the work you do during the semester.

1. Classwork, Homework, and Participation (15% of your overall grade)
2. Quizzes & Tests (85% of your overall grade)

Grades will be given as follows:

A	90 – 100%
B	80 – 89.9%
C	70 – 79.9%
D	60 – 69.9%
F	< 60%

Homework

Homework will be collected on the day of quizzes and tests. Please be organized. Keep your homework in a 3-ring binder or in a spiral notebook. The expectation is that each homework assignment will start at the top of a new page and will be labeled appropriately so that you, or I, can easily identify which assignment we are looking at.

Quizzes and Tests

Quizzes and tests will cover the material from class and from homework. If you miss a test or a quiz due to an excused absence you must schedule a time with me complete the task during Office Hours, at lunch, or after school. It is your responsibility to talk to me about this. Each Semester Final is comprehensive, covering material that has been covered up to that point in the year. If you do better on your Semester Test (by percentage), than you did on one or more of your Unit tests, I will replace the percent on your lowest Unit Test with the percent you earned on your Semester Test.

Missing Work Deadlines

Hellgate High School has the following deadlines for missing work and retakes. Any homework, tests, or quizzes that are not completed by the following dates will be scored a zero. Please make sure to work with me to avoid any of these zeros. I am available during Office Hours and almost every day at lunch to help you. You will be reminded frequently about these deadlines, and given plenty of opportunities to make sure you get your work completed on time. The deadline dates are as follows:

Semester 1:

- October 3
- November 7
- December 5
- January 9
- January 25 (End of Semester)

Semester 2:

- March 6
- April 3
- May 1
- June 6 (End of Semester)

Academic Honesty

You have decided to take a very demanding course of study. The pressure to do well is present. Please do not allow this pressure to force you into behaviors of academic dishonesty. We hope that students who chose to take IB courses fulfill all of the characteristics of the learner profile listed in the intro to this syllabus. One of these characteristics is being principled. The governance of this class with regards to academic honesty will follow the academic contract you signed when you registered to be a student at Hellgate High School. Please check the student handbook with regards to how instances of academic dishonesty will be handled.

Contact information

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