



IB Mathematics Studies SL							
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Course Codes	IBMASS1 and IBMASS2						
General Description	<p>Mathematics is greater than the simple study of numbers. In mathematics students will continue learning the processes involved with logical problem solving. These processes can be applied to a wide array of questions and problems.</p> <p>The aims of all mathematics courses in IB are to:</p> <ol style="list-style-type: none"> 1. Enjoy mathematics, and develop an appreciation of the elegance and power of mathematics. 2. Develop an understanding of the principles and nature of mathematics 3. Communicate clearly and confidently in a variety of contexts 4. Develop logical, critical and creative thinking, and patience and persistence in problem-solving 5. Employ and refine their powers of abstraction and generalization 6. Apply and transfer skills to alternative situations, to other areas of knowledge and to future developments 7. Appreciate how developments in technology and mathematics have influenced each other 8. Appreciate the moral, social and ethical implications arising from the work of mathematicians and the applications of mathematics 9. Appreciate the international dimension in mathematics through an awareness of the universality of mathematics and its multicultural and historical perspectives 10. Appreciate the contribution of mathematics to other disciplines, and as a particular “area of knowledge” in the TOK course. <p>The mathematical studies SL course is best suited to those who are preparing for careers that do not require a high level of mathematics. These include those interested in languages, social sciences, and the arts.</p>						
Syllabus Breakdown + hours	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">YEAR 1</th> <th style="width: 20%;">Teaching hours</th> </tr> </thead> <tbody> <tr> <td>Topic 1: Number and Algebra</td> <td style="text-align: right;">20</td> </tr> <tr> <td>Topic 2: Descriptive statistics</td> <td style="text-align: right;">12</td> </tr> </tbody> </table>	YEAR 1	Teaching hours	Topic 1: Number and Algebra	20	Topic 2: Descriptive statistics	12
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	<p>Topic 3: Logic, Sets and Probability 20</p> <p>Topic 4: Statistical Applications 17</p> <p>Topic 6: Mathematical Models 20</p>
	<p>YEAR 2 Teaching hours</p> <p>Topic 5: Geometry and Trigonometry 16</p> <p>Topic 7: Introduction to Differential Calculus 35</p> <p>Project 25</p>
Internal Assessments	<p>Mathematical Project 20% of final mark</p> <p>The mathematical exploration is an important piece of Mathematics SL. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations and other constraints that are associated with written examinations. Students will be designing plans for different projects after major units such as statistical applications, mathematical models and Calculus.</p>
External Assessments	<p>Paper 1</p> <p>Duration: 1 hour 30 minutes</p> <p>Weighting: 40%</p> <p>This paper consists of 15 compulsory short-response questions each worth the same amount of marks. A GDC (graphing display calculator) is required for this paper, but not every question will necessarily require its use.</p> <p>Paper 2</p> <p>Duration: 1 hour 30 minutes</p> <p>Weighting: 40%</p> <p>This paper consists of 6 compulsory extended-response questions. The questions in this section will vary in terms of length and level of difficulty and individual questions will not be worth the same number of marks. A GDC (graphing display calculator) is required for this paper, but not every question will necessarily require its use.</p>
<p>The Number Devil</p> <p>The Curious Incident of the Dog in the Night-Time</p> <p>The Math Book-Clifford A. Pickover</p> <p>Heese and Harris: Mathematics for the International Student (IB Diploma for Studies)</p> <p>Pearson Baccalaureate- Mathematical Studies</p>	
Activities/Projects	<p>Casino night</p> <p>Designing a disaster relief plan suitable for the geography.</p> <p>Finding efficient designs</p> <p>Finding the significance association between two categorical variables from a single population</p>
Feature lessons	<p>Making mathematical arguments</p>

	Geometry, Design and Culture Power of Prediction and Probability Transformation of Functions
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