



IB Mathematics SL													
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Course Codes	IBMATS1 and IBMATS2												
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 mathematics SL course is best suited to those who are preparing for a career heavily involved in business, mathematics, science, or engineering.</p>												
Syllabus Breakdown + hours	<table> <thead> <tr> <th colspan="2">YEAR 1</th> <th>Teaching hours</th> </tr> </thead> <tbody> <tr> <td>Topic 1:</td> <td>Algebra</td> <td>9</td> </tr> <tr> <td>Topic 2:</td> <td>Function and Equations</td> <td>24</td> </tr> <tr> <td>Topic 3:</td> <td>Circular Functions and Trigonometry</td> <td>16</td> </tr> </tbody> </table>	YEAR 1		Teaching hours	Topic 1:	Algebra	9	Topic 2:	Function and Equations	24	Topic 3:	Circular Functions and Trigonometry	16
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	<p>Topic 6: Calculus 40</p>
	<p>YEAR 2 Teaching hours</p> <p>Topic 4: Vectors 16</p> <p>Topic 5: Statistics and Probability 35</p> <p>Mathematical Exploration 10</p>
Internal Assessments	<p>Mathematical Exploration 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. Throughout the semester students will be doing rough drafts of potential projects after of the end of major units such as circular functions, probability and Statistics 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 section A, short-response questions, and section B, extended-response questions. Please note that students are not permitted access to any calculator on this paper.</p>
	<p>Paper 2</p> <p>Duration: 1 hour 30 minutes</p> <p>Weighting: 40%</p> <p>This paper consists of section A, short-response questions, and section B, extended-response questions. 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>Haese and Harris: Mathematics for the International Student (IB Diploma for HL)</p>	
Activities/Projects	<p>Modelling physical phenomena</p> <p>Using technology to solve problems</p> <p>History of mathematics and its influence</p>
Feature lessons	<p>Exploring the nature of infinity</p> <p>Game theory and real life</p> <p>Designing for the Turing Test</p>

