



Course Description

International Baccalaureate

Course Information

Name	Level (SL/ HL)	Both Years Mandatory (HL only)	Frequency (Years/ Dates)
IB Math: Applications & Interpretations	SL	No	

General Information

Description

This course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. The course makes extensive use of technology to allow students to explore and construct mathematical models. Mathematics: applications and interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures.

Expectations and Goals

Students in the course are typically working toward taking AP math courses the following year and/or earning an IB Diploma. All students taking this course will complete an Internal Assessment (exploration). At the end of the school year, 11th and 12th grade students can sit and take an IB External Assessment. 9th and 10th grade students in this course can take the IB External Assessment in 11th grade.

Learning Outcomes

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Materials

Lined paper, Graph paper, pencil, eraser, colored pencils/pens, highlighters, Graphing Utility*

*Graphing Calculators will be required for parts of this course. The TI-84 CE is the most popular, but others are fine (HP Prime, etc).

Required Text

Mathematics: Applications and Interpretations, Standard Level (Oxford)

NA Course Outline

Topic/ Unit	Topic	Year	Exercises
Unit 1	Measuring Space: Accuracy and 2D Geometry	1	
Unit 2	Representing Space: Non-Right Angled Trigonometry and Volumes	1	
Unit 3	Representing and Describing Data: Descriptive Statistics	1	
Unit 4	Dividing up Space: Coordinate Geometry, Lines, Voronoi Diagrams	1	
Unit 5	Modelling Constant Rates of Change: Linear Functions	1	
Unit 6	Modelling Relationships: Linear Correlation of Bivariate Data	1	
Unit 7	Quantifying Uncertainty: Probability, Binomial and Normal Distributions	1	
Unit 8	Testing for Validity: Spearman's Hypothesis Testing and Chi Square Test for Independence	1	
Unit 9	Modelling Relationships with Functions: Power Functions	1	
Unit 10	Modelling Rates of Change: Exponential and Logarithmic Functions	1	
Unit 11	Modelling Periodic Phenomena: Trigonometric Functions	1	
Unit 12	Analyzing Rates of Change: Differential Calculus	1	
Unit 13	Approximating Irregular Spaces: Integration	1	

Assessment Schedule

Date	Assessment
Year 1	Internal Assessment (20%), External Assessment (80%)

Additional Information and Resources

Add a Subheading

Add text.