

Group 5 Mathematical Studies SL

Subject: Mathematical Studies SL

What are the main aims of this subject?

This is the most accessible of the Mathematics options and is designed for students of varying Mathematical abilities and backgrounds to build confidence and encourage an appreciation of Mathematics. Students are encouraged to develop their problem solving abilities through logic, thinking skills and application of technology. Students are expected to be able to transfer skills to unfamiliar problems and communicate clearly all the steps in arriving at a final solution. The historical, societal and cultural aspects of mathematics are also considered.

Why may students consider this subject?

Students who do not anticipate a need for Mathematics as a significant part of their future academic studies, or whose university entrance requirements do not demand a minimum of Math SL. The course avoids some of the more difficult topics covered in Math SL, and goes to less depth in common topics. The course contains a number of topics that have relevance and application to real world, everyday situations.

What is the difference between Higher Level (HL) and Standard Level (SL) in this subject?

Mathematical Studies is only offered at SL.

Main Course Objectives: (adapted from IB Subject Guide) Having completed the course, candidates will be expected to be able to:

- read, interpret and solve a given problem using appropriate mathematical terms
- organize and present information and data in tabular, graphical and/or diagrammatic forms
- know and use appropriate notation and terminology
- formulate a mathematical argument and communicate it clearly
- select and use appropriate mathematical strategies and techniques
- demonstrate an understanding of both the significance and the reasonableness of results
- recognize patterns and structures in a variety of situations, and make generalizations
- demonstrate an understanding of and the appropriate use of mathematical modeling.

Main Units/Topics:

- Number and algebra
- Descriptive statistics
- Logic, sets and probability
- Statistical applications
- Geometry and trigonometry
- Mathematical models
- Introduction to differential calculus

Presumed knowledge for the course will need to be reviewed over the summer break prior to grade 11..

Assessment Information: Assessment that goes towards the IB Diploma consists of the Internal Assessment, one Mathematical Project linked to the main course content, and the External Assessments, which for Math Studies SL include two examination papers; one composed of fifteen short-answer questions and the other composed of five extended response questions. Calculators are permitted for both examinations.

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