Subject Selection 2020/2021

The structure of IB DP Mathematics courses, with two different pathways s to choose from, recognizes the two different aspects of mathematics discussed in the introduction.

The two different pathways are:

- Mathematical Analysis and Approaches (SL and HL)
- Mathematical Applications and Interpretations. (SL only)

Mathematics: Analysis and Approaches: Distinction between SL and HL

Students who choose Mathematics: Analysis and Approaches at SL or HL should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalization of these patterns. Students who wish to take Mathematics: Analysis and Approaches at higher level will have strong algebraic skills and the ability to understand simple proof. They will be students who enjoy spending time with problems and get pleasure and satisfaction from solving challenging problems.

At MCSHS in 2020, HL will only be offered in the subject – Analysis and Approaches. Both subjects will prepare students with the Mathematics needed for a range of further educational courses corresponding to the two approaches to Mathematics set out above. The University pre-requisites for courses aligning with the new Mathematical subjects are still being decided.

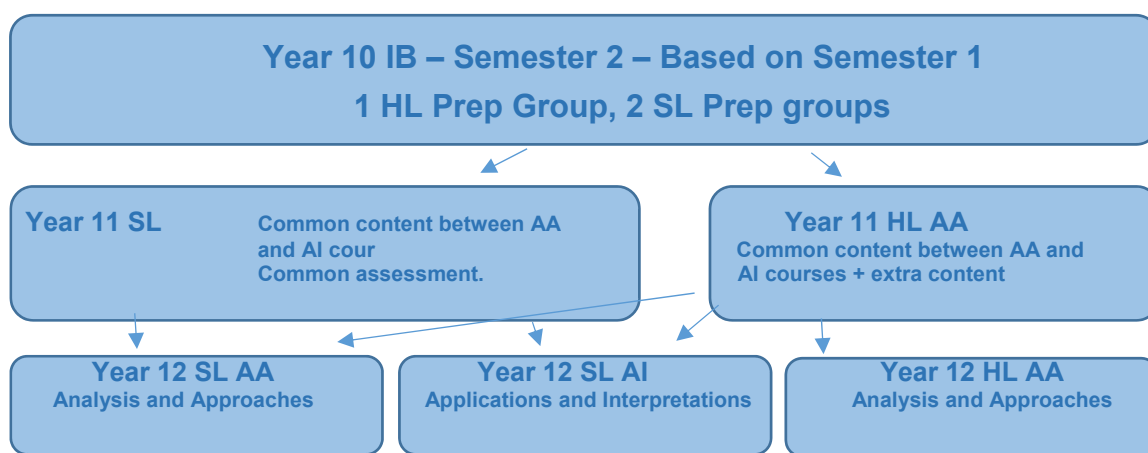## Mathematics: Application and Interpretation

Applications and Interpretation is for students who are interested in developing their mathematics for describing our world and solving practical problems. They will also be interested in harnessing the power of technology alongside exploring Mathematical models. Students who take Mathematics: Applications and interpretation will be those who enjoy mathematics best when seen in a practical context.

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 emphasises the meaning of mathematics in context by focusing on topics often used as Applications or in Mathematical modelling.

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.

HL is not offered at MCSHS in this pathway.

New Structure for IB at MCSHS

Allocation of hours in each pathway

	Mathematics: Analysis and approaches		Mathematics: Applications and interpretation
	SL	HL	SL
Number and algebra	18	34	18
Functions	21	31	26
Trigonometry and geometry	26	54	16
Statistics and probability	27	36	40
Calculus	28	55	20
"Toolkit" and IA	30	30	30
Total	150	240	150