IB Math Courses - Marietta High School

At MHS the following IB Math courses are offered:

Applications and Interpretation Standard Level Year 2 (AI SL)
Analysis and Approaches Standard Level Year 1 & Year 2 (AA SL)
Analysis and Approaches Higher Level Year 1 & Year 2 (AA HL)

Mathematics: Applications and Interpretation (AI) - This course emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modeling. 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.

At MHS, we teach year 2 of this course as many of the topics are covered through the standards of the Algebra 1, Geometry, and Algebra 2 courses students are required to take to earn a Georgia High School diploma. In general, IB students who are more humanities-focused take Applications and Interpretations as their IB math course.

Mathematics: Analysis and Approaches (AA) - This course includes topics that are both traditionally part of a pre-university mathematics course (for example: functions, statistics, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture, and proof, for instance, the study of sequences and series at both SL and HL, and proof by induction at HL.The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of the choice of course. However, Mathematics: analysis and approaches have a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments.

At MHS, our IB students who are STEM-focused generally choose Analysis and Approaches as their IB math course as it includes most of the topics in a traditional AP Calculus course. Prior to SY24, AA HL was offered only as a one-year course covering only the additional standards included in the HL syllabus and completed after students took AA SL Yr 1 and Yr 2. Starting in SY24, students will choose to take either the AA SL two-year course sequence or the AA HL two-year course sequence. Determining factors could include students' innate curiosity of mathematics, career goals, college major, and/or other HL courses the student plans to take.

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Required IB Assessments	Course - Year / %Weight of IB Score		
	AI SL	AA SL	AA HL
External Assessment (Test) - Paper 1	Yr 2 - 40%	Yr 2 - 40%	Yr 2 - 30%
External Assessment (Test) - Paper 2	Yr 2 - 40%	Yr 2 - 40%	Yr 2 - 30%
External Assessment (Test) - Paper 3			Yr 2 - 20%
Internal Assessment (written paper)	Yr 2 - 20%	Yr 1 - 20%	Yr 2 - 20%

IB Syllabus Components	Suggested teaching hours		
	AI SL	AA SL	AA HL
Topic 1 - Numbers & Algebra	16	19	39
Topic 2 - Functions	31	21	32
Topic 3 - Geometry and Trigonometry	18	25	51
Topic 4 - Statistics and Probability	36	27	33
Topic 5 - Calculus	19	28	55
IB Toolkit & Explorations	30	30	30