

# IB Mathematics: Grade 10 International

## Standard and Advanced Levels

10<sup>th</sup> Grade Intl. [6 periods per week]

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### Course Description

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This math course is a one-year course, required for a high school diploma. This course is designed to teach you the skills needed to apply mathematical techniques correctly, in subjects such as liberal arts, statistics, mathematics, physics, engineering and technology, and economics. A graphing calculator is highly recommended for this course. The instructor will use both the graphing calculator and possibly other mathematical software during class. Throughout the year students will be given both formative and summative assessments that test students learning and comprehension of the topics listed below.

### Timeline and Topics

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The course will be adapted to fit the needs of each student's needs as it will be split into 2 classes titles "Standard" and "Advanced".

The standard class is geared for students whose goals, university major, and possible career path does not include a substantial amount of math. As such it is taught under the assumption that once students enroll in the Diploma Programme starting in grade 11, they will likely choose Standard Level (SL) within their math course. Therefore, the year will be devoted to multiple concepts in Algebra so students can enhance their algebraic skills such as solving linear, absolute value, and quadratic equations and inequalities. Graphing lines and their real world applications will be discussed. Exponential and linear functions will be thoroughly investigated as well as the real, rational, and irrational numbers. The graphing calculator will aid in conceptual understanding of the course.

The advanced class is geared for students whose goals, university major, and possible career path do include a substantial amount of math. As such it is taught under the assumption that once students enroll in the Diploma Programme starting in grade 11, they will likely choose Higher Level (HL) within their math course. Therefore, while this year is solely an Algebra based class, the advanced section will go into further depth and cover more topics than that covered in the standard class. Topics covered include basic algebraic techniques, trigonometry, some precalculus, and possibly, if time permits, an introduction to Calculus.