

# Troy High School

## Course Profile

**Course Title:** Math IB SL (Math Analysis and Approaches IB SL)

**Course Prerequisites:** Refer to annual registration presentation

### **Course Description:**

IB Mathematics Analysis and Approaches SL recognizes the need for analytical expertise in a world where innovation is increasingly dependent on deep understanding of mathematics. This course includes topics that are both traditionally part of the pre-university mathematics course as well as topics that are amenable to investigation or conjecture and proof. This course allows the use of technology, as fluency in relevant mathematical software and handheld technology is important, but has a strong emphasis on the ability to construct, communicate, and justify correct mathematical arguments. The course is generally taken in the first or second year of a student's two-year IB Diploma Program coursework, preparing for culminating examinations in May.

The course also places a focus on the practice of mathematical writing, in preparation for the Mathematical Exploration, an officially assessed component of a student's IB Diploma coursework, in which students write a 12-20 page paper exploring an area of mathematical interest and relevance. Each unit contains a writing assignment specific to the unit that grows in length and complexity with each successive unit.

**Students entering this course should already have a mastery of the following concepts and possess the following skills:**

Students who choose Math IB SL should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalizations of these patterns. The course covers: number and algebra, functions, geometry, trigonometry, statistics and probability, as well as calculus.

**Workload expectations for this course:**

Assigned homework is approximately 30 to 40 minutes, five nights a week.