**Venice High School IB Mathematics Courses**

**IB Math Pathways:**

* IB Math courses require Algebra 2 (preferably honors) as a prerequisite.
* After Algebra 2 Honors or Honors Pre-Calculus students choose between two math pathways: Analysis and Approaches or Applications and Interpretation.
* Math Analysis and Approaches (AA) is offered at the SL and HL Levels.
* Math Analysis and Interpretation (AI) is offered at the SL level.

**Mathematics Applications and Interpretation (Math AI):** This course is designed for students who enjoy describing the real world and solving practical problems using mathematics, those who would like integrating technology to explore mathematical models and appreciate the practical side of mathematics.

* Emphasis on modelling and statistics
* Develops strong skills in applying mathematics to the real world.
* Mathematical problem solving using technology
* **Geared for students interested in careers in social studies, natural sciences, statistics, business, psychology, and design**

**Mathematics Analysis and Approaches (Math AA):** This course is intended for students who wish to pursue studies in mathematics at university or subjects that have a large mathematical content. It is for students who enjoy developing mathematical arguments, problem solving, and exploring real and abstract applications, with and without technology.

* Emphasis on algebraic methods
* Develops strong skills in mathematical thinking
* Real and abstract mathematical problem solving
* **Geared for students interested in mathematics, medicine, engineering, physics, physical sciences, economics, and some businesses**

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| --- | --- |
| **IB Analysis and Approaches** | **IB Applications and Interpretation** |
| Emphasis on calculus | Emphasis on statistics, modeling, and using technology |
| Recommended teaching hours percentages:   |  |  |  | | --- | --- | --- | |  | **SL** | **HL** | | **Number and Algebra** | 13% | 16% | | **Functions** | 14% | 13% | | **Geometry/ Trigonometry** | 17% | 21% | | **Statistics and Probability** | 17% | 14% | | **Calculus** | 19% | 23% | | **Exploration** | 20% | 13% |   \*40% of the SL content across both pathways is the same. | Recommended teaching hours percentages:   |  |  | | --- | --- | |  | **SL** | | **Number and**  **Algebra** | 11% | | **Functions** | 21% | | **Geometry/ Trigonometry** | 12% | | **Statistics and Probability** | 24% | | **Calculus** | 12% | | **Exploration** | 20% | |

**The VHS IB Mathematics Progression:**

IB Mathematics Applications and Interpretations (SL):

Grade 10: Algebra II Honors or Honors Pre-Calculus

Grade 11: IB Mathematics Applications and Interpretations 1

Grade 12: IB Mathematics Applications and Interpretations 2 (12: SL Examination)

IB Mathematics Analysis and Approaches (SL):

Grade 10: Algebra II Honors or Honors Pre-Calculus (11:students taking AP Calc take

Grade 11: AP Calculus AB or IB Mathematics Analysis and Approaches SL 1 AP Calculus AB Exam)

Grade 12: IB Mathematics Analysis and Approaches SL 2 (12: SL Examination)

IB Mathematics Analysis and Approaches (HL):

Grade 10: Honors Pre-Calculus

Grade 11: AP Calculus BC (11: AP Calc BC Exam)

Grade 12: IB Mathematics Analysis and Approaches HL 3 (12: HL Examination)

**Possible IB Paths:**

Advanced Pre-Calc

AP CALC BC

IB ANALYSIS & APPROACHES 3

AP CALC AB

ALGEBRA 2 HONORS OR PRE-CALC

IB ANALYSIS & APPROACHES 2

IB ANALYSIS & APPROACHES 1

IB APPLICATION & INTERP. 1

IB APPLICATION & INTERP. 2

**Additional Information to Help in Understanding the Differences:**

**https://blogs.ibo.org/blog/2019/06/20/mathematics-subject-breakdown/**