



IB Math Analysis

John Gaalaas

Room #229

Office hours: Monday, Tuesday, Thursday, and Friday 2:25-3:10pm

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“If you’re going to be passionate about something, be passionate about learning” – Daniel Golston

Welcome to my class! The following information is to help you prepare for and understand what will happen in our math class this year!

Course Description: This course has an emphasis on the analysis and applications of mathematics, with a large portion of the curriculum focusing on calculus and statistical techniques. It is designed for students with varied mathematical backgrounds and abilities. It offers students opportunities to learn important concepts and techniques and to gain an understanding of a wide variety of mathematical topics. It prepares students to be able to solve problems in a variety of settings, to develop more sophisticated mathematical reasoning and to enhance their critical thinking. It is a two-year course and is designed to prepare students to sit for the IB exam in Standard Level (SL) Math Analysis.

The course curriculum is a review and transfer of known topics into IB format and questioning. It will expand in the topics of quadratics, trigonometry, statistics and calculus. Each student will participate in writing an IA and sit for 2 ninety-minute exams at the end of their Senior year.

The course curriculum will cover:

- **Unit 1:** Sequences and series.
- **Unit 2:** Introducing functions.
- **Unit 3:** Linear and quadratic functions.
- **Unit 4:** Rational functions.
- **Unit 5:** Calculus: Differentiation.
- **Unit 6:** Statistics for bivariate data.
- **Unit 7:** Probability.
- **Unit 8:** Exponentials and logarithms.
- **Unit 9:** Calculus: Integration.
- **Unit 10:** Geometry and trigonometry in 2D and 3D.
- **Unit 11:** Trigonometric functions.
- **Unit 12:** Modeling change (more calculus).
- **Unit 14:** Probability Distributions.

Course Outline

Please refer to the [IB Analysis & Approaches Scaffolding Document](#) for details on content, pacing, and assessment.

Classwork Expectations

Classwork will be assigned almost daily, and its purpose is for the students to get independent practice. There will be class time provided for starting Classwork and getting questions answered as well. All assignments are graded only for completion, not accuracy. All answer keys are provided to the students and it is up to them to ensure that they are accurate in their assignment. Any Classwork assigned during the week will be due Sunday at 11:59 PM MDT. All late Classwork will be accepted; however, late Classwork will be docked 20%. No late work will be accepted after Week 8, Sunday, November 1, 2020 at 11:59 PM MST.

Assessment Outline

Project: (The IA) 20% of the total IB score: The project is an internal assessment that will require exact statistics and/or mathematics to complete. It will be graded within the school by the instructor. It is **NOT** a paper about mathematics, but rather a paper that utilizes mathematics to research a topic chosen for inquiry by the student. It is worth a maximum of 20 points for IB. The project should will be 12-20 pages. The first draft and final internal assessment will have firm deadlines. **Students who are not meeting the IA scaffolding dates are at risk of not receiving the IB Diploma.** Mrs. Ferrell, parents, counselors and administration will be notified to develop a plan which will include being placed in AAP.

Papers 1 & 2: 80% of the total score: Papers 1 and 2 are exams that comprise external assessments. They will be graded outside of our school. Answers on these exams must show the student's work. Answers without work may receive no marks.

Paper 1: 90 minutes	~15 short answer questions	(80 marks total)	40% of total IB score
Paper 2: 90 minutes	~6 long answer questions	(80 marks total)	40% of total IB score

Grading Policy

Fair and consistent grading will be facilitated through the use of different methods of evaluation. The student will have many opportunities to understand and pass the subject matter.

Weighted breakdown of the overall grade:	Assessments	80%
	Classwork	10%
	Final	10%

IB Predicted Scores and IB Grade Translations

See the (insert link for grade translations here) for more details on assessment weights.

- **Grade Translations:** While this course is assessed on a traditional A-F letter grade scale in terms of your GPA and requirements for graduation, your IB score is on a scale from 1-7, where a score of 4-5 is seen as satisfactory. IB assessments therefore have grade translations rather than using "straight points" in order to speak to your proficiency in this course.
- **Predicted Scores:** Your percentage grade in this course should reflect your predicted score for the IB course, though the presence of multiple late or missing assignments will impact accuracy. Predicted scores, which are often requested by universities, are submitted to the IB early second semester.

School Procedures and Expectations

See [RHS Parent Teacher Handbook](#) for details regarding late work, make-up work, "Re-takes", technology usage, dress codes, etc.

As a general rule of thumb, students and staff should act in accordance to the [Renaissance Mission and Vision](#) and with the [RHS Learner Profile](#) attributes and [Approaches to Learning](#) as guides.

SIGN AND RETURN TO MR. GAALAAS (YOU KEEP THE REST)

I have read the syllabus and understand the requirements of this class.

Student's Printed Name _____

Student's signature _____ Date _____

Parents' or Guardians' signature _____

Questions or Concerns:

Updated Guardian email: _____