

IBDP Mathematics Studies SL (Year 2)

Teacher: Janine da Silva
Email: Janine.dasilva@aism-moz.com

Should you wish to learn more about our course or to discuss your learner's progress, please reach out to the email above to schedule a time to meet.

Course Description and Units of Learning:

The IB DP mathematical studies standard level (SL) course focuses on important interconnected mathematical topics. The syllabus focuses on placing more emphasis on student understanding of fundamental concepts than on symbolic manipulation and complex manipulative skills; giving greater emphasis to developing students' mathematical reasoning rather than performing routine operations; solving mathematical problems embedded in a wide range of contexts; using the calculator effectively.

There is an emphasis on applications of mathematics and statistical techniques. It is designed to offer students with varied mathematical backgrounds and abilities the opportunity to learn important concepts and techniques and to gain an understanding of a wide variety of mathematical topics, preparing them to solve problems in a variety of settings, develop more sophisticated mathematical reasoning and enhance their critical thinking.

For a more detailed exploration of this course, [the IB Subject Guide is available at this link.](#)

Geometry and Trigonometry

The aims of this unit are to develop the ability to draw clear diagrams, to represent information given in two dimensions, and to develop the ability to apply geometric and trigonometric techniques to problem solving.

Students will further explore measurements of 3 dimensional objects, including angles, volume, and surface area.

Mathematical Modeling

The aims of this unit are to develop understanding of some mathematical functions that can be used to model practical situations. Extensive use of a graphic display calculator (GDC) is to be encouraged in this topic. Quadratic, exponential, and rational functions will be explored.

Calculus

The aim of this topic is to introduce the concept of the derivative of a function and to apply it to optimization and other practical problems

This year we have begun planning and implementing units of study based on our Critical Learning Outcomes within the IB MYP and DP frameworks. Please see ManageBac for unit overviews as they are taught throughout the year.

Assessment in the Diploma Programme

Assessment is a key component of the learning process as it allows teachers to respond with targeted feedback to learners for continued growth and to revise their instruction to better meet the needs of their learners. In order to provide learners with the opportunity to reach critical learning outcomes and develop a range of approaches to learning skills, our IB Diploma teachers develop rigorous tasks that embrace a variety of strategies in line with desired learning outcomes and with each course's internal and external assessments.

Working backwards from these assessment components, teachers craft learning experiences which support each learner's mastery of key content, concepts, and skills in every subject. Learners can expect to receive regular feedback on all three elements, with important culminating experiences such as IA drafts and mock examinations in the second year. For culminating tasks, teachers and learners are guided by criteria provided at least one week prior to the due date. DP teachers also work to ensure that learners not only understand but engage in applying evaluation criteria to their own work as well as that of their peers. Core components such as Theory of Knowledge, CAS, and the Extended Essay support each learner's progress across the programme, as learners apply critical thinking, the design cycle, and research skills to each subject.

Families and learners at AISM can expect to receive regular reporting of their performance as they work towards mastery of critical learning outcomes.

Learning Management Systems

Across the Secondary School, we utilize ManageBac for sharing key activities and assessments, as a digital workspace, for communication with learners, and for reporting on learner performance to families. Some teachers may supplement the digital learning environment with Google Classroom, and you can expect an emailed invitation to sign up for regular updates from Google Classroom if so.

Homework

Any learning activity which is expected to take place outside of the classroom will appear as assignments and tasks on ManageBac. Homework is most often an extension of activities or projects either begun or included in the classroom, but may include common activities like reading, reinforcement of content or skills within a unit of study, or distributed practice activities, such as flashcards for example, to support learner recall of low-level content.

Reporting

As a rough guide, learners and families can expect an update on performance every few weeks. These updates, available in ManageBac, represent a check-in on learner performance toward mastering critical course objectives and learning outcomes, prior to each unit's culminating assessment.