**Math Studies IB**

2015-2016

**Instructor:** Mrs. Kristen Skaff

**Room:** D-31

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**Course Description:**

Mathematics is a tool we use to understand and interpret our world. It is the language used to describe patterns and solve quantitative problems in fields ranging from art and graphic design to science and engineering. It also develops creativity and higher order thinking skills. Because the level of
mathematical thinking and problem solving needed in the workplace and in the world continues to
increase, those who understand mathematics will have opportunities others do not. Mathematical
competence opens doors to productive futures, and the IB Math Studies program is one of the courses
where students gain such competence.

Mathematical Studies, available as a standard level (SL) subject only, caters to students with varied backgrounds and abilities. Students embarking on this course need to be equipped with fundamental skills and a rudimentary knowledge of basic processes. The nature of mathematical studies is such that it concentrates on mathematics which can be applied to contexts related as far as possible to other curriculum subjects, to common general world occurrences and to topics that relate to home, work and leisure situations. The Internal Assessment project provides an opportunity for the student to undertake an investigation of a mathematical nature in the context of another subject in the curriculum, a hobby or interest of his/her choice using skills learned before and during the mathematical studies course.

**Course Objectives:**

The following topics will be taught throughout the course (not necessarily in this order).

**TOPIC 1** - Introduction to the GDC

 (graphic display calculator)

**TOPIC 2** - Number and Algebra

**TOPIC 3** - Sets, logic and probability

**TOPIC 4** - Functions

**TOPIC 5** - Geometry and trigonometry

**TOPIC 6** - Statistics

**TOPIC 7** - Introductory differential calculus

**TOPIC 8** - Financial mathematics

**CLASSROOM EXPECTATIONS**

1. **Respect** yourself and your future
2. **Respect** your fellow students and their right to learn
3. **Respect** your teacher (and other adults on campus)
4. **Respect** your school

**Materials:**

Textbook: Mathematical Studies – Standard Level (Oxford)

Graphing Calculator (TI 83 or 84 preferred)

**Grading Policy:**

* Grades will be calculated based on the following weighted categories:

First Semester:

55% -- Tests, Quizzes, and Projects

15% -- Classwork and Homework

10% -- Internal Assessment

20% -- Midterm Exam

Second Semester:

60% -- Tests, Quizzes, and Projects

20% -- Classwork and Homework

20% -- Midterm/Final Exam

* The following grading scale will be used:

 98 – 100 A+ 88 – 89 B+ 78 – 79 C+ 68 – 69 D+ 0 – 59 F

 93 – 97 A 83 – 87 B 73 – 77 C 63 – 67 D

 90 – 92 A- 80 – 82 B- 60 – 62 C- 60 – 62 D-

**Tests, Quizzes, and Projects:**

Tests will be given at the end of each chapter. These assessments will typically be worth 100 points each and will always be announced in advance. Students who are absent the day of the test are expected to take the test on the day that they return to school. Students absent only the day before a test must take the assessment on test day with the rest of the class. Extended absences will be addressed in accordance with school policy. In addition to chapter tests, students will be given quizzes which may vary in point value and will not always be announced in advance. There are no make-ups for quizzes that are worth 10 points or less. Projects will be assigned throughout the year and are worth a variety of points.

**Classwork and Homework:**

Classwork activities will be occasionally assigned and are due at the end of class unless otherwise specified. Warm-up activities will be collected as a packet on the day of each unit test. In order to support the content learned in class, homework will be assigned nightly and is worth 10 points. For full credit, all problems must be answered completely with supporting workand the assignment must organized and legible. Incomplete assignments receive no credit. If you do not complete the entire assignment on time, finish your work and turn the assignment in late. Late assignments will receive half credit and will be accepted one class day late. Homework and classwork will typically be graded based on completion; however, certain assignments may be graded based on accuracy.

**Project (Internal Assessment):**

The course includes project work, a feature unique to mathematical studies SL. The project provides an opportunity for students to carry out a mathematical study of their choice using their own experience, knowledge and skills acquired during the course. The project is scored out of total of 20 marks and will count as **20% of your IB mark** and 10% of your class mark.  This project will be internally assessed based on seven assessment criteria.  You will be given a portion of your time in class to work on your projects.  More information regarding this project will be given in class and provided on the website.

**Midterm/Final:**

You will be given a midterm exam at the end of the 1st semester. There will also be a cumulative final exam given prior to the IB exam in May.

**IB Exam:**

All students are expected to take the IB Exam in May.

*Mrs. Skaff reserved the right to modify any of the above policies as necessary.*

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Please sign below to confirm that you have reviewed this Math Studies IB course guide together. Return this signed syllabus to class on 8/31. A copy of the syllabus can be found on the website.

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