

International Baccalaureate Mathematics

@ Durham Sixth Form Centre

“Pure mathematics is, in its way, the poetry of logical ideas.

- Albert Einstein

“Some people enjoy the challenges offered by the logical methods of mathematics and the adventure in reason that mathematical proof has to offer. Others appreciate mathematics as an aesthetic experience or even as the corner of philosophy”

(taken from the syllabus for Mathematics SL and HL for IB)

The IB Mathematics SL and HL courses aim to introduce students to a range of mathematical concepts. They will give a sound mathematical background for future study of subjects such as Chemistry, Physics and Economics. Obviously, if you want to go on and study Mathematics all the maths that you have done in the past will play its part. If you enjoy and perhaps even love the subject, this is the greatest help in doing well. But even if this isn't exactly you. Building up your “Mathematical Toolbox” will come in handy whatever you choose to do in the future.

Courses:

Mathematics Standard Level and Higher Levels

What will I learn?

In studying Mathematics as part of your IB diploma you will have the opportunity to develop a wide range of mathematical skills. The list of topics that you will study over the two years is as follows:

Algebra, Functions and equations, Trigonometry, Matrices
Vectors, Statistics and probability, Calculus

Throughout the study of the above topics, you will use graphical display calculators and graphical software. Additionally the Higher Level syllabus extend the above topics and offer the opportunity to investigate further topics by studying one of four Options chosen from:

Statistics and Probability, Sets, Relations and Groups
Series and Differential Equations or Discrete Mathematics

Assessment:

External

At the end of the second year, all students will sit an external examination:

Standard Level:

Paper 1: Non-Calculator Component (40%) 1.5 hours long, a combination of short-answer and extended answer questions.
Paper 2: Graphic Display Calculator Component (40%) 1.5 hours long, a combination of short-answer and extended answer questions.

External

Portfolio: (20%) A collection of the two best pieces of portfolio work completed during the two years of the course. The assignments are based on different areas of the syllabus and represent mathematical investigation and mathematical

Higher Level:

Paper 1: Non-Calculator Component (30%) 2 hours long, a combination of short-answer and extended answer questions on the Core Syllabus.
Paper 2: Graphic Display Calculator Component (30%) 2 hours long, a combination of short-answer and extended answer questions on the Core Syllabus.
Paper 3: Graphic Display Calculator Component (20%) 1 hour long, extended answer question on the Optional Topic

Portfolio: (20%) A collection of the two best pieces of portfolio work completed during the two years of the course. The assignments are based on different areas of the syllabus and represent mathematical investigation and mathematical modelling.

