

## Why choose Mathematics & Further Mathematics?

Mathematics is a very popular choice at A level, with one of the highest entries (nationally) in any subject. For many students it plays a complementary role, supporting their studies in Physics, Economics or other subjects. Others study Mathematics because they find it interesting, enjoyable and because they happen to be good at it. Students should find the course stimulating and challenging. It does require consistent hard work, but opens up many future opportunities for students.

Mathematics/Further Mathematics is relevant to a wide range of Higher Education courses. In addition Mathematics would be a desirable qualification in many occupations; The Civil Service, finance, banking; in technical, computing, scientific and engineering work, and in governmental and developmental institutions.

Mathematics/Further Mathematics is a rigorous and highly academic A Level that is sought after by all Russell Group universities.

## What will you learn?

Mathematics is about working with the patterns and structures found in science and technology. From computers and space exploration, to body scanners and medicine, understanding these patterns helps explain and control natural happenings and situations.

There are three main strands in Mathematics at A Level.

Core is where we study interesting and often quite beautiful questions such as:

Can you find three distinct numbers  $a$ ,  $b$ ,  $c$  so that

$$a^{(b^c)} = c^{(a^b)}$$

In Mechanics we study motion and change such as, why do you fall backwards when the tube carriage lurches forward?

In Statistics we learn about uncertainty and likelihood so we can answer questions such as what would be the best way to pick our future husband or wife?

## Why study Maths at Hackney New Sixth Form?

- Specialist teachers - There is a shortage of specialist teachers in STEM subjects in the whole country, and London is no different. At HNSF you will be taught subjects by teachers who are specialists.
- A focus on study skills - universities have been very vocal over the last few years about how ill prepared they feel new students have been for degree-level study. At HNSF you will be taught study skills to help you prepare for university, both in lessons and the way you do homework but also in dedicated slots. We do more than just teach you the content, aware that the two years between GCSE and university is our chance to make sure that bright students are ready for further study.

## What are the entry requirements for studying Maths and Further Maths at HNSF?

Entry requirements:

For A level Mathematics: TBD

For A level Further Mathematics: TBD

## How will I be assessed?

LEVEL	UNIT	ASSESSMENT	Duration	Weighting
AS	Core 1 (Pure Maths)	Written paper	1½ hours	16.666%
AS	Core 2 (Pure Maths)	Written paper	1½ hours	16.666%
AS	Statistics 1	Written paper	1½ hours	16.666%
A2	Core 3 (Pure Maths)	Written paper	1½ hours	16.666%
A2	Core 4 (Pure Maths)	Written paper	1½ hours	16.666%
AS (taken in Year 13)	Mechanics 1 (M1)	Written paper	1½ hours	16.666%

## A LEVEL FURTHER MATHEMATICS

Students studying both Mathematics and Further Mathematics should have achieved an A\* at GCSE, or equivalent and pass an entry test in September (unless they have a grade A\* in the AQA certification in Further Maths). The course will lead to two A levels and is highly regarded by both universities and employers. It forms an excellent basis for studying Mathematics at university. Students study Pure Mathematics to a much greater depth than A level, as well as further options in Mechanics, Statistics and Decision Mathematics.

Students will study all of the above A level Mathematics units (including both M1) and in addition:

Level	Unit	Assessment	Duration	Weighting
AS	Further Pure 1	Written paper	1½ hours	16.666%

A2 (taken in Year 12)	Mechanics 2	Written paper	1½ hours	16.666%
A2	Statistics 2	Written paper	1½ hours	16.666%
A2	Statistics 3 or Mechanics 3	Written paper	1½ hours	16.666%
A2	Further Pure 2	Written paper	1½ hours	16.666%
A2	Further Pure 3	Written paper	1½ hours	16.666%