

Course: GCSE Mathematics (Edexcel 1MA1)

How is the course assessed?

Students will sit three 90 minute papers at the end of year 11. This will consist of 1 non-calculator and 2 calculator papers. There are two tiers of exams in GCSE Mathematics - Foundation (grades 1 - 5) and Higher (4 - 9).

What could the course lead to?

A GCSE Mathematics qualification is a necessary entry requirement for many post-16 courses and apprenticeships, and are a requirement for the majority of employers due to the development of numeracy and problem solving skills. All students are required to continue with GCSE Maths post-16 if they have not attained a grade 4.

Career links include engineering, finance, data analysis, teaching and IT.

Year 10/11

There are 5 lessons a week in year 10/11, and we use one lesson a fortnight to develop disciplinary knowledge. Students may work on problem solving skills, multi step problems, exam techniques, UKMT challenge questions.

Knowledge
(substantive
and
disciplinary)

3 pathways, reviewed from the end of year 9

- Units are sequenced to ensure that necessary conceptual building blocks are taught prior to larger concepts and to allow maximum opportunity to make connections between topics.

Y10/11 Support/Core

Y10 Autumn Term	Y10 Spring Term	Y10 Summer Term	Y11 Autumn Term
Place Value (NC)	Fractions & Decimals (NC)	Geometric Reasoning (NC)	Transformations (NC)
IPR (NC)	Ratio, Proportion & Rates of Change (NC)	Volume & 3D shapes (NC)	Probability (NC)
Constructions & Loci (NC)	Sequences (NC)	*Geometry: proving (NC)	Statistics (NC)
Use of Symbols (NC)	Solving Equations (NC)	Graphs & Functions (NC)	Mock 1
Percentages (NC)	Perimeter, Area, *Pythagoras & Trig (NC)	Solving Equations 2 (NC)	

Y10/11 Advanced

Y10 Autumn Term	Y10 Spring Term	Y10 Summer Term	Y11 Autumn Term
Place Value (NC)	Percentages (NC)	Graphs & Functions (NC)	Solving Equations 2 (NC)
IPR (NC)	Sequences (NC)	Transformations (NC)	Pythagoras and Trig 2 (NC)
Pythagoras and Trig (NC)	Solving Equations (NC)	Ratio, Proportion & Rates of Change (NC)	Graphs & Functions 2 (NC)
Geometric Reasoning (NC)	Perimeter/Area/Similarity (NC)	Probability (NC)	Mock 1
Use of Symbols (NC)	Volume & 3D shapes (NC)	Statistics (NC)	
Fractions & Decimals (NC)			

Students will sit mock exams in Summer Term in year 10, as well as Autumn and Spring Terms in Year 11.

In year 11 we use our professional judgement and mock analysis (Question Level Analysis) to arrange a bespoke and personalised curriculum.

Autumn 2	Spring 1	Spring 2
Topics based on Y11 Autumn Mock 1	Topics based on Y11 Autumn Mock 2	Exam Practice

Further Maths

Some of our students are offered the chance to study for another qualification - Further Maths (AQA Level 2 Certificate in Further Mathematics (8365)). Students will develop some of the skills needed in lessons and will attend tutor time and after school sessions focusing on Further Maths exclusively. This extends many of the GCSE topics to a higher level, and introduces some new Mathematics that students will develop further in A-Level, that acts as a transition to post-16.

The topics studied are broken into six topics: Number, Algebra, Co-ordinate Geometry, Calculus, Matrix Transformations and Geometry.

Y11 Autumn Term	Y11 Spring Term	Y11 Spring Term
Number & Algebra I	Algebra IV	Geometry II
Algebra II	Coordinate Geometry	Calculus
Algebra III	Geometry I	Matrices

Note: Pace and Progress

As per the national curriculum, the expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.