

Further Maths (Edexcel)



Course Content

Further Mathematics A Level is offered in conjunction with Mathematics. This combination forms two of your four option choices. What the Further Mathematics course is not, is simply more mathematics at a similar level to the single subject A Level. Having gained a working knowledge of the essentials, you go on to study pure mathematics in much greater depth. You will learn advanced techniques in areas such as integration and matrix theory which are fundamental to physics and engineering at degree level and beyond. You will look at a wide variety of mathematical applications, from how to model the behaviour of elastic strings and springs to the theory behind linear regression. More time will be spent in proving results and you will learn to think creatively and to look for elegance. The interconnectedness of seemingly unrelated topics, which is one of the things that gives mathematics its beauty, will start to become much more apparent. At The Grange, throughout the two years you are taught completely separately from single subject mathematicians. You will work towards the equivalent of a full A Level in Mathematics in the L6, before tackling the Further Mathematics course in the U6. The Further Mathematics course is 50% Pure, 25% Mechanics and 25% Statistics.

Assessment

At the end of the Year 13, in addition to your A Level Mathematics papers, you will sit four equally weighted papers of 1 hour 30 minutes. Two of the papers will examine the pure content, one mechanics and one statistics. Calculators are permitted in all papers.

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Why Study Further Maths

Many students take Further Mathematics simply because they enjoy mathematics for its own sake and thrive on intellectual challenge. It is quite usual for Further Mathematicians to complete full A levels in all four of their subjects, so choosing it need not restrict the breadth of your Sixth Form studies in any way. It is also possible to drop one of your two non-maths options at the beginning of the U6.

You will want to take Further Mathematics if you are considering a degree course in mathematics or a closely related subject. Not only will some universities expect you to have taken it given that it is offered at The Grange, but, unlike single subject Mathematics, it will give you a realistic flavour of what mathematics at university entails.

If you hope to read physics or the physical branches of engineering at universities such as Oxford, Cambridge and Imperial College, studying Further Mathematics will improve your chances of gaining a place. Further Mathematics (as one of four A Levels) is also strongly preferred for some of the most competitive economics courses, such as that at LSE. If you have a particular direction in mind at this stage, check the specific course requirements.

Is Further Maths the right choice

The pace in the Further Mathematics set is fast and you will need to reach A Level standard by the end of the L6. In addition to the requirements for single subject Mathematics, you must be capable of picking up ideas quickly and of thinking on your feet. Discussing your suitability with your current teacher is therefore crucial.

You do not need to have studied any additional mathematics qualifications beyond IGCSE/GCSE Mathematics.

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