Further Mathematics

Awarding Body	Edexcel	Specification Code	9FM0

Type of qualification	A Level
Entry Requirements	GCSE grade 8 or above Students must study A Level Mathematics to take this course.
Course Content	The Further Mathematics course is designed to increase the range and depth of mathematical skills and methods students can use to model real world situations and is made up from 2 components: A mandatory Pure Mathematics component and an Applied Mathematics component comprising two optional units. We plan to teach Decision 1 and Decision 2 as our optional units. In the Pure Mathematics component students will extend their knowledge and application of many skills and methods learned in A Level Mathematics alongside learning about numbers and methods beyond this. A few examples of new content are imaginary and complex numbers (including De Moivre's theorem), matrix calculations and their applications, and the vector geometry of lines and planes. Decision Mathematics studies the mathematics behind the decisions we make every day in business, travel and games. Themes within Decision Mathematics are algorithm design (sorting routines), graph theory (eg, travelling salesperson problem), linear programming (finding the best solution that satisfies a list of restraints), critical path analysis (the quickest way to complete a project given a list of tasks) and game theory (heavily used in sport and financial trading). Decision
Assessment Method	Four written papers – 1½ hours each **Papers 1 and 2** – Pure Mathematics from any area of the Pure specification. Each paper has 75 marks. **Paper 3** – Decision 1. This paper has 75 marks and covers the D1 course specification. **Paper 4** – Decision 2 – This paper has 75 marks and covers the D2 course specification.
Career Pathway	Mathematics degree course, leading to many careers such as - financial trading - accountancy - actuarial work - data analysis - investment analysis - software engineering - acoustic engineering *If you are considering any form of Engineering course then Further Mathematics is listed as one of the preferred A Levels for many universities, whilst some universities require it for entry to their course.
More information from	Mrs J Wells jwells@newent.gloucs.sch.uk