St Benedict's Sixth Form

# A Level Mathematics

## Course Description

Mathematics at A-Level is a demanding but enjoyable subject which goes well with science subjects and others such as geography. The course builds upon knowledge gained at GCSE as well as introducing new concepts and looking at some GCSE content in more detail. In Year 12, students will study one compulsory pure maths unit which covers the areas of algebra, geometry and number as well as studying one applied unit in mechanics and statistics. In Year 13, students will study another compulsory pure maths unit and another applied unit in mechanics and statistics. The pure maths accounts for two thirds of the course and the mechanics/statistics will account for one third of the course. Examples of topics studied include graphs, calculus, trig equations, probability distributions, hypothesis testing and forces, friction and variable acceleration.

## Skills Attained

The maths course develops students' logical thinking skills as well as their analytical and problem solving skills. They will be expected to apply their knowledge to a variety of contexts. The Statistics aspect of the course teaches students how to analyse and present data, skills which are very relevant in the working world. The Mechanics section of the course has a significant crossover with A-Level physics and allows students to apply mathematical concepts in real-world contexts involving forces, gravity, speed and acceleration.

## Assessment

The course is assessed by external examination only with three exams, two pure and one applied, taken in the summer of Year 13. Internal assessments to monitor the progress of students over the course of Years 12 and 13 are regular, and homework tasks are given out on a weekly basis. There will be a baseline assessment in September of Year 12 to assess knowledge of grade 7-9 GCSE material.



## Progression

Mathematics is highly valued A-Level by both universities and employers alike. Many science-based courses at university require the study of at least 2 'hard science' subjects at A-Level of which maths is one. It is therefore an excellent A-Level to have for anybody who is thinking of taking subjects such as medicine, biomedical sciences, optometry and other similar courses at university. It is also useful for students looking to enter careers in the financial sector such as banking, finance, business, actuarial science, accountancy and tax, whether this is via a university course or straight into employment after finishing in sixth form. Over the last few years, students who have studied Maths at A-Level have gone on to university to study subjects such as maths, physics, medicine, healthcare science, biomedical science, engineering, mechanical engineering, law, and accounting and finance.

## Entry Requirements

Grade 7 in GCSE Mathematics

**Exam Board: Edexcel**

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