



Guilsborough Academy Sixth Form KS5 Curriculum

A Level Mathematics

Course Title:

A Level Mathematics

Entry Requirements:

Grade 6 in GCSE Maths.

Examination Board

Edexcel

Assessment:

Year 12

Pure Mathematics

Statistics

Mechanics

(Examined by three 2 hour exams
at the end of Year 12)

Year 13

Pure Mathematics

Statistics

Mechanics

(Examined by three 2 hour exams)

Is this course right for me?

Did you enjoy Mathematics at GCSE? The algebra topics in particular? Then A Level Mathematics is for you. In Pure Mathematics you will build on the solid base you have developed at GCSE and explore familiar areas of algebra and geometry in greater depth while also being introduced to the branch of Mathematics known as Calculus. You will also look at applying a range of mathematical techniques in Statistics and Mechanics to model a variety of different situations.

You will find the style of learning and expectations very similar to those in Year 11. Lesson time will be spent working through examples together and gaining confidence in that topic. You will be expected to complete a large amount of work outside lessons which will involve working through exercises from the book as well as work from other sources. To ensure all students are fully prepared for the challenges of the course, we will conduct an algebra assessment to help identify any areas which you may require additional support with, so that you have the necessary skills to access the content.

A LEVEL MATHEMATICS

Unit Contents:

Year 1 Pure Mathematics:

Algebra I, polynomials and Binomial Theorem, differentiation, exponential and logarithms

Year 1 Statistics:

Collecting, representing and interpreting data, probability and discrete random variables, hypothesis testing I

Year 1 Mechanics:

Vectors, units and kinematics, forces and Newton's laws

Year 2 Pure Mathematics :

Algebra II, sequences, numerical methods, trigonometric identities, differentiation, integration and differential equations

Year 2 statistics:

Probably and continuous random variables, hypothesis testing II, large data set

Year 2 mechanics:

Motion in two-dimensions, forces



Progression:

This course is suitable for those who would like to continue to study Mathematics at university, or pursue a career in a range of different areas including Physics, medicine and general science, engineering, banking and finance and teaching.

Examples of university courses and grades required:

- **University of Durham** BSc Mathematics requires A*AA
- **University of Birmingham** BSc Mathematics requires AAA
- **Coventry University** BSc Mathematics requires ABB
- **University of Leicester** BEng General Engineering requires BBB



Further Information Contact:

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