# MATHEMATICS

**QUALIFICATION** **AS/A Level**

**Examination Board** **EDEXCEL**

**What do I need to know or be able to do before taking this course?**

Students should have at least a grade 7 in GCSE Mathematics.

**What will I learn on this A Level course?**

Mathematics is a challenging subject and at AS and A level you will learn many new skills.

The subject is divided into three main branches: Pure Mathematics (67%), Mechanics and Statistics (total of 33%).

**Pure Mathematics**

In Pure Mathematics you will extend your knowledge and skills in such topic areas as algebra and trigonometry. You will also be introduced to calculus, which is a very powerful mathematical tool. Many of these skills will be needed as you learn to apply mathematics in order to solve problems in the other branches of the subject.

**Mechanics**

In Mechanics, you will learn how to model real life problems involving the motion of objects and the effect of forces on stationary bodies. Mathematics can then be applied in order to analyse and solve problems. Mechanics has very strong links with some elements of Physics and is particularly relevant if you are considering a career in Engineering.

**Statistics**

The start of the course concentrates on some important probability theories and models. You will also develop the skills to set up surveys to investigate theories, making decisions based on statistical analysis. This subject particularly complements work in Psychology, Geography, Economics, Business Studies and Biology.

**What kind of student is this course suitable for?**

This course will appeal to students who:

- enjoy solving mathematical problems and applying their mathematical skills to solve real life problems;

- want a course that will complement other AS and A levels especially sciences with Maths and Mechanics
- want a course that will complement other AS and A levels especially humanities and social sciences with Maths and Statistics

**What is covered on the AS/A level course?**

AS and A level will be separate qualifications. An AS level qualification will no longer count towards A level.

The content is examined as follows:

| Title | Component | Assessment |
|---|---|---|
| AS level Mathematics | Paper 1: Pure Mathematics<br>Paper 2: Statistics and Mechanics | 2 hours<br><br>1 hour |
| A Level Mathematics | Paper 1: Pure Mathematics<br>Paper 2: Pure Mathematics<br>Paper 3: Statistics and Mechanics | 2 hours<br><br>2 hours<br><br>2 hours |

**What could I go on to do at the end of my course?**

- Follow a degree course in mathematics, the sciences, psychology, geography, sociology, engineering, medicine plus a number of related subjects;

Mathematics is a highly rated subject and even if you do not intend to study it further, an AS or A level qualification would demonstrate your ability to think logically, solve problems and communicate ideas precisely. These are all skills that are valued by employers.