

# MATHEMATICS

## AS & A Level

### This subject will suit you if:

- You really find Mathematics an interesting subject and you enjoy solving problems.
- You want to be challenged and stretched by studying more difficult topics.
- You have a logical mind and want to develop your reasoning abilities.
- You are planning to study either Mathematics or a related degree at university.



### What You'll Study

- You'll develop your existing knowledge of topics from GCSE including Algebra, Geometry, Trigonometry, Series, Calculus and Vectors.
- You can study a mixture of applied units over the two years to support your chosen career or interest.
- **Mechanics** involves studying the behaviour of objects and structures under the action of certain forces.
- **Statistics** is all about collecting, analysing and presenting data and calculating probabilities.
- **Decision Maths** looks at logical and systematic methods used to solve modern business problems.
- In the first year you will complete an AS level in Mathematics. This consists of two Core Mathematics units and one Applied Mathematics unit.
- In the second year students study three more units leading to a total of four Pure units and two Applied units.
- Each unit is assessed by an external examination of 1½ hours.

**AS Mathematics**  
can be split into three different parts.

**Mechanics**  
combines well with the Physical Sciences.

**Statistics**  
combines well with Biology, Geography, Psychology, Law, Accounting & the Social Sciences.

**Decision**  
combines well with Economics, Business Studies, ICT & Computing.

### Additional Entry Requirements

At least a grade B in GCSE Maths is essential.

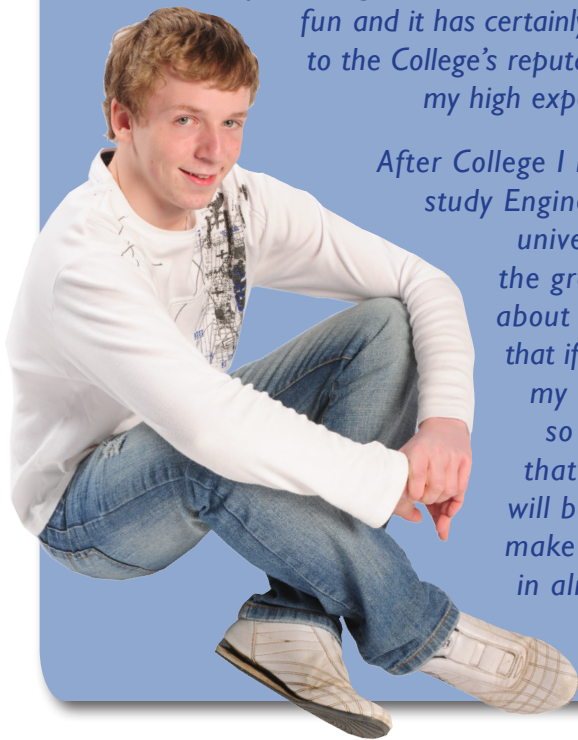


### Paul Gilmour

*"Whilst at school, I always loved the feeling I got when I solved a really challenging problem, especially when I found that I had actually got the right answer! Consequently, Maths became one of my favourite subjects.*

*At College the Maths content has been thought-provoking but also interesting and fun and it has certainly lived up to the College's reputation and my high expectations.*

*After College I intend to study Engineering at university but the great thing about Maths is that if I change my mind, it's so versatile that I know I will be able to make use of it in almost any career."*



First year Mathematics students have had the opportunity to see presentations by visiting speakers about the Mathematics involved in such diverse areas as mountaineering, aircraft design and the computer games and film industries.



Professor Marcus Du Sautoy of Oxford University gave an entertaining lecture:

"The Num8er My5teries" and small groups of students have attended "Maths Inspiration" events in Leeds.

Our students regularly attend open days and revision days at the Mathematics department of Manchester University. College tutors also help to prepare students for STEP examinations (sometimes required by Universities), for

Maths interviews at University and for the Advanced Extension Award.

Each year the college takes part in the UK Senior Maths Challenge a multiple choice paper of puzzles designed to stimulate mental agility and mathematical reasoning. Certificates are awarded to many participants.

### Ideas for Progression

An A level in Mathematics can be advantageous to many students. It is suitable for those who want to study diverse subjects at university including Engineering (Civil, Chemical, Aeronautical, Electrical and Mechanical), Physics, Architecture, Computing, Medicine, Optometry, Accounting, Actuarial Science, Business, Social Sciences, Science, Electronics, Economics, Journalism, Chemistry and Law. It is always highly regarded by employers requiring high levels of logical thought.



### Zuleikha Khatun

*"I chose to study Maths because I find it very interesting and the pass rates here are good. It's different from any other subject, like a completely different language to me! I also enjoy the class itself - I participate in the discussions here the most. The teachers are great, easy to approach and ask for help with any work. It's good to know that if I'm struggling I can just drop in to any workshops or e-mail any of my tutors. When I leave College I'm hoping to progress to university to study for a degree relating to Maths and teaching."*



To find out more you can visit our website: [www.osfc.ac.uk](http://www.osfc.ac.uk)