

MATHEMATICS & STATISTICS

Level: AS and A2

Examination Board: AQA

Mathematics is a challenging and exciting subject and provides an opportunity for students to develop their understanding of mathematics and its application whilst also learning how to apply mathematics to solving 'real world' problems. Students learn how to communicate mathematically, develop an ability to reason logically and they gain an awareness of the relevance of mathematics to many other fields of study.

The modular course offered allows for a number of different options for study, including Mathematics, Further Mathematics and Statistics, incorporating a wide range of modules involving Pure Mathematics, Statistics, Mechanics and Discrete Mathematics. Students have the opportunity to select the most suitable modules and this allows them to complement their other AS options. Hence, a student wishing to study Physics or Chemistry would normally opt to study Mechanics whereas those students interested in Economics, Geography or Biology may well opt for the Statistics modules. The optimum option choice is best discussed with each student on an individual basis.

We also offer a full AS or A level qualification in Statistics and this is particularly designed for students who wish to concentrate on this area of Mathematics or who are not wishing to study Pure Mathematics. It is also a valuable alternative to Further Mathematics as a second Mathematics A-level.

Course Structure :

AS Level :

Students study two **AS** modules during the Lower Sixth and the following options are available:

1. **Mathematics** including Pure Mathematics and Statistics
2. **Mathematics** including Pure Mathematics and Mechanics
3. **Mathematics** including Pure Mathematics and Discrete Mathematics
4. **Statistics**
5. **Further Mathematics** including Pure Mathematics and Discrete Mathematics; requires three extra modules

Students therefore have the option at AS level to study for **one AS level** (Mathematics and Statistics) or **two AS levels**, (either Mathematics and Further Mathematics or Mathematics and Statistics).

A-Level

Students study two further **A2** modules during the Upper Sixth. The following A-level options are available :

1. **Mathematics** including Pure Mathematics and Statistics
2. **Mathematics** including Pure Mathematics and Mechanics
3. **Mathematics** including Pure Mathematics and Discrete Mathematics
4. **Statistics**
5. **Further Mathematics** including Pure Mathematics and Discrete Mathematics; requires three extra modules

As for AS level, a student can study for **one A-level** (Mathematics or Statistics) or **two A-levels**, (either Mathematics and Further Mathematics or Mathematics and Statistics)

Assessment :

For AS-level, Mathematics and Statistics assessment is by external examination of two modules at the end of Year 12 and this accounts for 50% of the final mark. Further Mathematics will involve a further three module examinations at the same time. Subsequent entry to the A2 level will be subject to AS results. A-level assessment involves an examination of another two modules at the end of Year 13. Once again, Further Mathematics will involve a further three module examinations at the same time.

There is no coursework requirement for this syllabus.

Entry Requirements :

Students wishing to pursue any of these courses should have obtained at least a high grade B at the higher tier of GCSE. In addition, a potential student should demonstrate an interest for this subject. Study of Further Mathematics requires at least a grade A at GCSE.