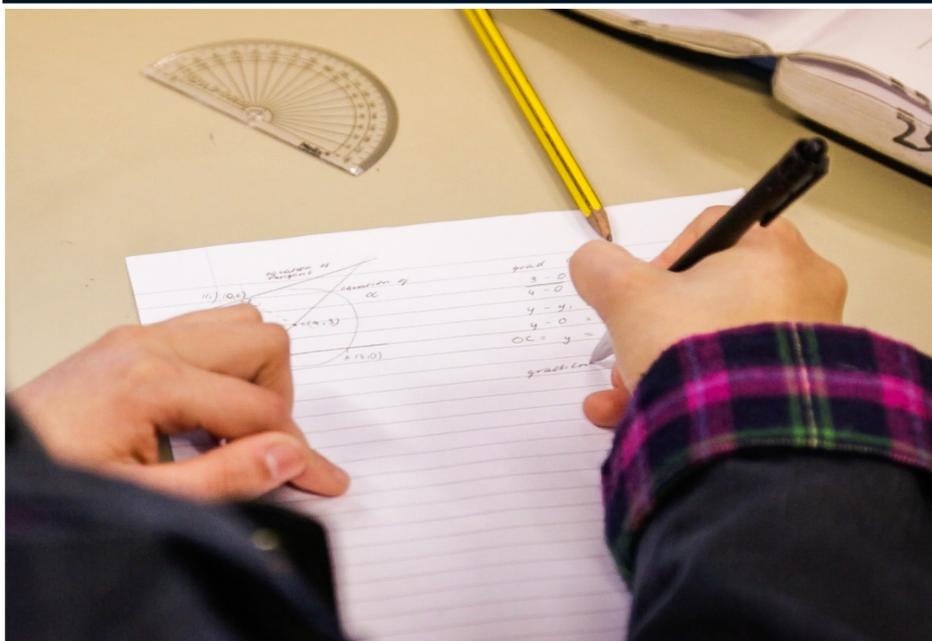# Mathematical Studies (AS)

About the Subject

The AS Mathematical Studies course aims to build on the knowledge, understanding and skills established at GCSE. This is a linear qualification which is designed to be studied over two years, with a final exam taken at that point.

The focus is to consolidate student's mathematical understanding and build both their confidence and competence in applying a range of mathematical techniques to solve a variety of problems. The course introduces new techniques and concepts that will prepare them for further study and future employment within a broad range of academic, professional and technical fields.

Mathematical Studies aims to prepare students for the mathematical demands of higher education and work, where there is a distinct mathematical element, but where the mathematical demands do not stretch to a requirement for A Level Mathematics.

Course Content

Students will be expected to:
• Develop and demonstrate confidence and competence in the understanding and application of calculations in the solution of problems relating to personal finance.
• Become familiar with and gain confidence in ideas concerning the formulation of mathematical models.
• Develop and demonstrate confidence and competence in the understanding and application of statistical techniques, interpreting data and drawing conclusions in the solution of problems.

To further the links with other subjects, there will be a focus on research methods. Students will also be expected to:
• Use the data and models they are given and to be mathematically critical of these.
• Recognise that many things closely follow a normal distribution, e.g. heights of people, size of things produced by machines, errors in measurements, blood pressure, marks on a test etc. In these and similar situations, a graph of the distribution will have a 'bell' shaped curve.
• Understand the sampling process and the underlying populations.
• Recognise and use correlation and regression for pairs of data.

Entry Requirements

The entry requirements for Mathematical Studies is a grade 5 or above in Maths at GCSE.

Career Paths

As this qualification is aimed at supporting those who are not doing A Level Mathematics, but have a strong mathematical content in their future careers, it will be suitable for entry on to a wide range of higher education courses, from Nursing to Psychology, Geography to Sport Science. Alongside this, it gives an extension to the GCSE course for apprenticeships in business, financial services etc.

The government has recognised the need for more students to continue with mathematics and this course allows this with the more practical approach to certain areas. This course will give the extra study and develop key problem solving skills that are required by all employers.