

Spalding Grammar School Sixth Form

Subject Information

Mathematics

Entry Requirement:

Grade 7 in GCSE Mathematics.

Awarding body: Cambridge International Pre-U

About the subject: Studying Mathematics at this level will teach you to think logically, process information accurately and understand and manipulate numbers and mathematical processes.

Cambridge Pre-U is considered to be an excellent preparation for university, employment and life. It helps to develop the in-depth subject knowledge and understanding which are so important to universities and employers. While it is a satisfying subject in its own right, mathematics is also a prerequisite for further study in an increasing range of subjects. You will find that degrees in Mathematics, Statistics, Physics, Astronomy, Engineering, Computer Science all require Mathematics at advanced level. However, many other subjects, including Medicine, Architecture, and the social sciences have a certain amount of mathematical content.

The course aims to enable pupils to:

- Develop a broad range of mathematical skills and appreciate their application in a wide range of contexts
- Develop an understanding of how different branches of mathematics are connected
- Recognise how a situation may be represented mathematically and understand how mathematical models may be refined
- Use mathematics as an effective means of communication through the correct use of language and notation.

Two-thirds of the course is Pure Maths, which is the mathematician's tool kit expressed mainly in algebra.

The remaining third of the course is split between two applications: Statistics and Mechanics.

- Statistics allows us to make sense of the world around us through data analysis and includes working with large data sets.
- Mechanics builds on Newtonian ideas of motion and forces and is strongly linked to Physics; mathematical models are used to better understand physical situations.

Assessment:

Examination will be by written exams at the end of the course. This consists of three papers, each of 2 hours duration. Two of the papers are on the Pure Mathematics content and the third is divided equally between the two applications.

Pre-U courses are graded on a nine-point scale (rather than the six-point A*- E scale at A Level). There are three Distinction, three Merit and three Pass grades. The three levels of Distinction grade are equivalent to or beyond that of an A grade at A Level, and so the very best candidates are able to distinguish themselves by gaining higher grades than are available at A Level.