

Mathematics

Exam Board: WJEC

Mathematics is a very popular subject in the 6th Form and most students choose it because they enjoy Mathematics and wish to continue to gain satisfaction from it by studying it in more depth. In addition to developing students' numerical skills, Mathematics develops their ability to analyse and solve problems in a logical way, explaining their reasoning using symbols with precision. Although students mix Mathematics with all kinds of subjects (History, Art, English etc.) it provides particular support for those with some underlying mathematical content, such as Physics, Chemistry, Biology, Economics and Geography. Mathematics is normally required for post-18 study of Mathematics, Physics and Engineering, and it is valued by many university departments.

Minimum Entry Requirements

- A minimum of 6 A* to C grades at GCSE with a **B** grade in Mathematics at the Higher Tier.
- If you have any queries, please contact Mr M Wagner (Head of Faculty).

AS course

The new specification for AS Mathematics will include one pure mathematics unit and one applied mathematics unit. The applied mathematics unit will contain a combination of statistics and mechanics. The topics covered will include proof, functions and their graphs, trigonometry, co-ordinate geometry, calculus, displacements, velocities and accelerations, forces, Newton's Laws of Motion, probability theory and analysis of large data sets.

Unit 1: Pure Mathematics A (AS Level 62.5% / A Level 25%)

Unit 2: Applied Mathematics A (AS Level 37.5% / A Level 15%)

A2 course

In addition to the units studied at AS level, there will be an additional unit in both pure and applied mathematics. The topics include further trigonometry, more advanced calculus and trigonometry, numerical methods, statistical hypothesis testing, statistical distributions, differential equations, projectiles and more advanced uses of Newton's Laws.

Unit 3: Pure Mathematics B (A Level 35%)

Unit 4: Applied Mathematics B (A Level 25%)

Career Opportunities

The following is a list of some of the employment areas in which advanced mathematical skills are highly valued: accountancy, aerospace, automotive, defence, business support services, chemicals, construction, consultancy, engineering, environment, financial services, local and national government, healthcare, insurance, management, information systems, manufacturing, metals and minerals, pharmaceuticals, scientific research, social policy research, telecommunications, transport, and utilities.