Mathematics

One Year AS/Two Year A level.

Mathematics is a demanding and highly valued qualification. Mathematics students study concepts such as quantity, structure, space and change that are essential for our understanding of the world around us.

Requirements:
The College minimum to start an advanced level course is one grade B and four grade Cs at GCSE. All students who are applying for A Level Mathematics must have studied Higher Tier GCSE and have at least a grade B. The student will also be expected to meet the Average Points Score for this subject. Extra support, Mathematics Coaching (one hour per week), is available to help students with the transition from GCSE to A Level. All students with a grade B at GCSE will start on Mathematics Coaching and will be enrolled on this in September. Other students may be identified as needing Coaching at enrolment, or during the year, or may opt into these sessions.

This subject will focus on:

- Pure Mathematics – algebra, geometry, trigonometry, calculus and numerical method;
- the study of mathematical applications - mathematics applied to the real world, including;
    - Mechanics – the mathematics of force and motion, as used in physics and engineering;
    - Statistics – the mathematics of data and probability, as used in economics and psychology; and
    - Decision mathematics – the mathematics of algorithms and optimisation, as used in business and computing.

You can expect to:

- widen and deepen your understanding of mathematical concepts;
- learn to use and apply a wide range of mathematical techniques; and
- use and interpret mathematics in modelling situations based on the real world.

Method of assessment:
Assessment is by examination.

Progression:
Mathematics is used throughout the world in many fields, including natural science, engineering, medicine and the social sciences such as economics. Applied Mathematics, the application of mathematics to such fields, inspires and makes use of new mathematical discoveries and sometimes leads to the development of entirely new disciplines.

Students with A Level Mathematics have excellent career prospects. They work in education, finance and government. From IT to insurance, good mathematicians are always in demand. A Level Mathematics is useful for many degree courses and essential for some.

Other information:
Students who have taken GCSE Mathematics a year early and achieved grade A/A*, and/or are studying one or more AS modules in their present schools, and /or students who are intending to take Mathematics or Engineering at degree level, should consider taking Double Mathematics i.e. Mathematics and Further Mathematics.

Student Success at Havering Sixth Form College:
Christopher Shipway (ex Emerson Park) achieved A grades in Mathematics and Further Mathematics at AS Level and is predicted As at A Level. He plans to study Mathematics at Exeter University.

Mathematics had a 97% pass rate at A Level in 2009.