



Chemistry

One year AS/Two year A level.

Chemistry plays a vital role in everyday life. Society relies on the chemist to discover new anti-viral drugs, monitor the atmosphere for pollution, provide forensic evidence and to develop a range of new materials such as polymers, fertilisers, semi-conductors and plastics.

Requirements:

The College minimum to start an advanced level course is one grade B and four grade Cs at GCSE. Students wishing to undertake this course require grade BB or above in Core and Additional GCSE Science or C grade in GCSE Chemistry together with grade C, or preferably grade B, in GCSE Mathematics. Students studying AS Chemistry with a grade C in GCSE Mathematics must also enrol for the Chemistry support class at the start of the course. The student will also be expected to meet the Average Points Score for this subject. AS/A Chemistry must be taken with either AS/A Mathematics or another AS/A science course.

This subject will focus on:

- establishing the patterns and principles in chemistry based on the periodic table of elements;
- calculating amounts and concentrations;
- why different substances have particular physical properties;
- the reactions of alkali earth metals and halogens;
- organic chemistry including hydrocarbons, fuels, polymers, alcohols and halogenoalkanes; and
- rates of reaction, chemical equilibrium and energy changes in chemical reactions.

You can expect to:

- learn how materials behave and react at the atomic level and synthesise polymers such as nylon and PVC;
- understand how medicines and drugs affect the body at the molecular level and synthesise compounds such as aspirin and paracetamol in the laboratory; and
- become familiar with modern analytical techniques such as MRI which have been responsible for major advances in medicine.

Method of assessment:

Assessment is by examination and a series of assessed practicals during the year. Students will have several opportunities to repeat assessed practicals.

Progression:

Chemistry can lead to a wide variety of degree courses including Chemical Engineering, Medicine, Dentistry and Pharmacy.

Many career opportunities are open to you as a chemist, whether you work in the area of medicine, public service or industry. Chemists are also in great demand in management as well as in manufacturing, the service industries and forensic science.

Student Success at Havering Sixth Form College:

James Wilson (ex Marshalls Park) gained three A Levels at grade A including Chemistry and chose to study Chemical Engineering at Surrey University.

Mehtab Khan (ex Stratford) achieved an A grade in A Level Chemistry and is studying Medicine at Queen Mary University and said: "The teachers were the best, I really enjoyed the course."

In 2010 Abigail Oyekunle achieved 100% in her A2 Chemistry module Rings, Polymers and Analysis. Ex Royal Liberty student, Shakeel Soogun, also achieved 100% in his paper on Atoms, Bonds and Groups. Abigail plans to study Biomedical Science at Brighton University.

Chemistry had a 98% pass rate at A Level in 2008, with 51% achieving grades A and B.