LOUGHBOROUGH
Amherst School

A Level Chemistry

Entry Requirements

GCSE grade required: Grade 7 in GCSE Chemistry or Combined Science and grade 6 in GCSE Maths

Exam Board

OCR

Course Content

Chemistry A, H432

In the first year your understanding of chemistry from GCSE will be reinforced and extended. The following topics will be covered:

1. **Foundations in chemistry**
   Atoms, compounds, molecules and equations
   Amount of substance
   Acid–base and redox reactions
   Electrons, bonding and structure
2. **Periodic table and energy**
   The periodic table and periodicity
   Group 2 and the halogens
   Qualitative analysis
   Enthalpy changes
   Reaction rates and equilibrium (qualitative)
3. **Core organic chemistry**
   Basic concepts
   Hydrocarbons
   Alcohols and haloalkanes
   Organic synthesis
   Analytical techniques (IR and MS)

In your second year of study you will take the foundation topics to a higher level. Topics will include:

4. **Physical chemistry and transition elements**
   Reaction rates and equilibrium (quantitative)
   pH and buffers
   Enthalpy, entropy and free energy
   Redox and electrode potentials
   Transition elements
5. **Organic chemistry and analysis**
   Aromatic compounds
   Carbonyl compounds
   Carboxylic acids and esters
   Nitrogen compounds
   Polymers
   Organic synthesis
   Chromatography and spectroscopy (NMR)

The Practical Endorsement assesses the practical skills gained during the two years of study.

Future Pathways

An A Level in Chemistry will enable you to access a future in materials chemistry, pharmacy, pharmacology, biochemistry, chemical engineering, dentistry, medicine and veterinary science, sports science, radiology, food science and forensics. In addition, a study of Chemistry will open up careers that require skills in problem solving, numeracy, communication, teamwork and practical ability.