CHEMISTRY

Course information

Exam board: OCR Chemistry A

Key topics on A Level specification

Organic Chemistry: Moles, Alkanes, Alkenes, Haloalkanes, Amines, Arenes, Carbonyls, Carboxylic Acids, Esters, Analysis.

Physical Chemistry: Atomic Structure, Bonding, Redox, Kinetics, Equilibrium, Thermodynamics, Acids and Buffers, Electropotentials, Transition Metals

Skills

The course aims to:

- Develop essential knowledge and understanding of different areas of the subject and how they relate to each other.
- Develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods.
- Develop competence and confidence in a variety of practical, mathematical and problem solving skills.

Assessment

Three examinations at the end of Year 13:

1. Periodic table, elements and physical chemistry, 2 hours 15 min
2. Synthesis and analytical techniques, 2 hours 15 min
3. Unified chemistry, 1 hour 30 min

All papers contain questions related to practical chemistry. Papers 1 and 2 contain some multiple choice questions.

In addition, students can receive Practical Endorsement. This is awarded if the student completes compulsory practical tasks over the two years of study and demonstrates the necessary skills.

Complementary Subjects

Maths and other Sciences
Languages – degree courses which have a year abroad will link the two
Geography

What do students go on to study at University?

Chemistry, Natural Science, Engineering, Medicine, Dentistry, Veterinary Science, Biomedical Sciences, Geology, Maths.

Extension opportuntities

- Cambridge Chemistry Challenge
  Sessions run throughout the year to prepare for a fiendishly difficult examination at the end of Lower Sixth. The exam is set by Cambridge University and requires students to apply their knowledge to novel questions.

- Chemistry Olympiad
  Sessions run throughout the year to prepare students for the International Chemistry Olympiad examination in February.

- Spectroscopy Day
  An opportunity for Lower Sixth students to visit a local university to complete an organic synthesis and analyse their product using spectroscopic techniques.

Suggested reading:

Some students benefit from completing a Moles Workbook before starting the course.
These are available by request.

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