AS/A2 Level CHEMISTRY

Course Guide

Level 3 Two-year course

2010/11

Students who succeed in Chemistry are lively, intelligent and enjoy problem solving. They pay attention to details and can relate topics together. They enjoy science and can solve numerical equations.

SEE WHAT'S NEXT

Subject introduction

AS and A2 Chemistry give an interesting and stimulating survey of the three main areas of Chemistry:

- Organic (essentially the chemistry of carbon compounds)
- Inorganic (the chemistry of metals and non-metals other than carbon)
- Physical Chemistry (which involves heat changes, rates of reactions, etc.)

Studying Chemistry at AS and A2 Level involves understanding a wide range of topics and solving a variety of problems.

AS and A2 Level Chemistry are modular courses. In the first year, students take the Unit 1 exam in January and two further exams in June. There are three further exams in the A2 year.

Year 1 study outline

Students study a 2-module AS course in their first year. This involves the study of Atomic Structure, Bonding and Periodicity (Unit 1), Foundation Physical and Inorganic Chemistry (Unit 2) and Organic Chemistry. Coursework involves practical skill assessment and an investigative skill assessment (ISA).

Year 2 study outline

In the second year of the course (A2) students will study Further Physical and Organic Chemistry, Thermodynamics and Further Inorganic Chemistry. Coursework consists of further practical and investigative assessments.

Methods of study

Students will be provided with study booklets covering each module. These include all teaching notes, exercises, references, and link to practical and IT activities. Practical work is an important part of the teaching and learning of Chemistry.

It is important that students build up their skills and learn to relate observations and experimental design to theory. Tests are set at the end of each topic (there are several in each module) both to monitor students' progress and to encourage students to learn the material. Homework is set every week. Support is given during some free periods and lunch hours to help students who have difficulties or who have been ill. Support materials are available on the College's Virtual Learning Environment.

Studying Chemistry involves a great deal of problem solving. This includes a wide range of calculations, synthetic pathways and interpretation of spectra.

Special features

Students learn about modern analytical techniques and how these are used in combination with traditional chemical tests in the identification of unknown compounds. Students also have to build up their practical skills for the preparation and accurate analysis of compounds. Students are encouraged to enrich their study of Chemistry by consulting a range of books, magazines and Internet resources.

In the summer term, there are frequent visits by pupils from primary and secondary schools for demonstration talks and practical classes.

Subject combinations and careers

Chemistry A Level is an essential qualification for Medicine and Veterinary Medicine, Chemistry, Pharmacy, Forensic Science, Biochemistry and Chemical Engineering. Chemistry is also a preferred A Level subject for anyone intending to study Biological Sciences, Physiotherapy, Dentistry, and Materials Science and is frequently studied by students who go on to study Mathematics, Physics or Engineering at University. Some also study A Level Chemistry and pursue a career in finance or business.

Most students who study A Level Chemistry also study A Level Physics, Maths and/or Biology. But others study Computing, English, Psychology and a wide range of others.

Success stories

We currently have several former SEEVIC College students studying Chemistry at various universities around the country, including Cambridge.

Last year six of our students went on to study Pure or Applied Chemistry or Forensic Science courses at University.

Methods of assessment

Students take the first AS exam module in January and two others in June. Coursework is worth 12% of the total mark.

What is it that makes Chemistry so interesting?

"I see Chemistry as the most creative of the sciences. You can actually produce something and really help make a difference. For this reason I am going on to study Environmental Chemistry at University." – former student, Sarah Lucking.

"Chemistry is the most interesting science, as answers are definite and not just theories. The different experimental and analytical techniques taught at SEEVIC College make Chemistry fascinating. I particularly enjoy the practical side of Chemistry and problem solving. This is why I am going on to study Forensic Science." – former student, James Acott.

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