

CHEMISTRY

AS / A Level

Awarding body: Edexcel

Course content

In Chemistry you will explore your ability to analyse and explain data, recognise trends and patterns and solve problems which have relevance in any work environment.

This specification provides a modern course which will help you to relate what can appear to be obscure knowledge with the world around you. It shows you the relationship between the development of the subject and its social, economic, environmental and technological applications by using specific in context examples. You can also develop your knowledge through practical investigation and test your own understanding by explaining and evaluating your findings.

It is interesting, fun and we love teaching Chemistry here at Fullbrook!

AS

The AS is assessed through 2 written exams at the end of the year, each worth 50% of the AS level. A minimum of 20% of the marks across both papers will be awarded for mathematics at Level 2 or above. Each unit is examined by a 90 minute terminal exam including a mixture of question types. You will receive a separate grade for practical competency by completing a series of practical tasks during the year.

Unit 1: You will learn about the following

Topic 1 : Atomic Structure and the Periodic Table Topic 2: Bonding and Structure
Topic 3: Redox I Topic 4: Inorganic Chemistry and the
Periodic Table Topic 5: Formulae, Equations and Amounts of Substance

Unit 2: You will learn about the following

Topic 2: Bonding and Structure Topic 5: Formulae, Equations and Amounts of
Substance
Topic 6: Organic Chemistry I Topic 7: Modern Analytical Techniques I
Topic 8: Energetics Topic 9: Kinetics I
Topic 10: Equilibrium I

A2

The A Level is assessed through 3 written exams at the end of the year. A minimum of 20% of the marks across both papers will be awarded for mathematics at Level 2 or above. You will receive a separate grade for practical competency by completing a series of practical tasks during the year.

Paper 1: Advanced Inorganic and Physical Chemistry (30%)

Topic 1: Atomic Structure and the Periodic Table Topic 2: Bonding and
Structure Topic 3: Redox I Topic 4: Inorganic
Chemistry Topic 5: Formulae, Equations and Amounts of Substance
Topic 8: Energetics I
Topic 10: Equilibrium I Topic 11: Equilibrium II
Topic 12: Acid-base Equilibria Topic 13: Energetics II
Topic 14: Redox II Topic 15: Transition Metals

Paper 2: Advanced Organic and Physical Chemistry (30%)

Topic 2: Bonding and Structure Topic 3: Redox I
Topic 5: Formulae, Equations and Amounts of Substance Topic 6:
Organic Chemistry I Topic 7: Modern Analytical Techniques I Topic 9:
Kinetics I
Topic 16: Kinetics II Topic 17: Organic Chemistry II

Paper 3: General and Practical Principles in Chemistry (40%)

A synoptic paper covering the whole specification. Some questions will assess conceptual and theoretical understanding of experimental methods.

Teaching and learning methods

We use practical work, discussion, note-taking, problem solving, group and paired work, analysis and interpretation, calculations, reading, independent research, and exam practice. You may sometimes take part in teams to compete against each other when revising a topic! As a department we have regular weekly support sessions as well as having an open-door policy to ask questions.

Skills and Commitment

Students who take an AS in Chemistry will have enjoyed the GCSE but feel they still have unanswered questions and a desire to understand more about the world around us at a fundamental level. We look at Chemistry in context, including the environmental, pharmaceutical and medicinal worlds and ask students to apply their knowledge and understanding to some concept based tasks within these modern day situations.

Cost

The Edexcel Chemistry textbook will be supplied for the students at a cost of £20. There will be a deposit system which will allow a full refund, as long as the books are handed back unmarked and in a good condition at the end of the year. A small voluntary contribution of £3 will be requested for past paper exam packs.

Progression

Chemistry complements many other AS subjects including Physics, Biology, Maths, Geography and PE and is also highly regarded as a stand alone Science. Lots of students continue with their Chemistry studies and are choosing careers linked to this exciting and contemporary subject. Chemistry is often a compulsory AS or A-Level for students wishing to pursue a career in Medicine, Veterinary Science, Dentistry or Pharmacy.

Entry requirements

Students wishing to study A Level Chemistry must achieve **Grade 6** in two Science (Core, Additional or Extension) GCSE's, whilst 6 in Maths and 5 in English are recommended.

***Thinking of studying more than one AS Science subject or taking AS Science with AS Mathematics?**

The majority of science students typically study one Science subject in Year 12. We **strongly recommend** that students wishing to study more than one AS Science subject, or an AS Science and AS Mathematics subject, have grades 7/8 or above in their GCSE Science subjects and GCSE Mathematics.

Contact

For further information please contact Mrs L Pettinato, Head of Chemistry.