

Chemistry

Why study Chemistry?

Chemistry is involved in all parts of our lives in ways that we don't always appreciate. It helps to explain and enhance the material world that we live in. Studying Chemistry allows you to delve deeper into the behaviour of organic molecules, to see how simple medicines like aspirin can be synthesised and learn more about how plastics are made. You get to study molecules that are the building blocks of life. Studying Chemistry is the subject for you if you are looking for answers, explanations and like to solve problems.

Course Outline

The course has three units:

- Physical chemistry - including amount of substance, atomic structure, bonding, thermodynamics, rate equations, equilibrium constant (K_c) for homogeneous systems, electrode potentials and electrochemical cells.
- Inorganic chemistry – including Group 2 and Group 7 chemistry, properties of Period 3 elements and their oxides, transition metals, reactions of ions in aqueous solution.
- Organic chemistry - including alkenes, alcohols, isomerism, aldehydes and ketones, carboxylic acids and derivatives, aromatic chemistry, amines, polymers, amino acids, proteins and DNA, organic synthesis, NMR spectroscopy, chromatography.

Assessment

There are 3 written papers (worth 35%, 35% and 30% of the final A Level grade) all of which are taken at the end of the A Level course.

20% of A Level marks require the use of higher GCSE mathematical skills and 15% of A Level marks are awarded for practical knowledge and understanding.

Practical assessment of skills takes place throughout the year with students gaining a pass or fail that will accompany their A Level grade.



Head of Learning

Miss S L Speirs

Departmental Staff

Dr G Brown
Miss S Flook
Mrs N S Nicholas
Mr N Shah

Exam Board

AQA A Level Chemistry

Where are they now?

Recent students of Chemistry at CRGS have gone on to study:

- Biochemistry (Sheffield)
- Biomedical Sciences (Newcastle)
- Chemistry (Oxford, Warwick, York)
- Dentistry (Newcastle)
- Engineering and Mathematics (Sheffield Hallam)
- Global Health and Social Medicine (Kings College London)
- Optometry (Manchester, Bradford)
- Medicine (Birmingham, Glasgow, Leeds)
- Natural Sciences (Cambridge)
- Pharmacy (De Montfort)
- Physics (Durham)
- Psychology (York)
- Radiotherapy/Oncology (Cardiff, Liverpool)
- Veterinary Sciences (Liverpool)



Frequently Asked Questions

Q. Is any previous knowledge required to study this subject?

You should have *either* 2 GCSEs in Combined Science at grade 6 or above (i.e. grade 6 or above in both) *or* grade 6 or above in GCSE Chemistry. All Chemistry students should also have grade 6 or above in GCSE Mathematics.

Students are required to meet the General Entry Requirement of a minimum of 4 GCSEs at grade 6 with at least GCSE grade 4 in English Language.

Q. What opportunities are there for Extended Learning?

Students can read Chem Review which is available from the Sixth Form Library. We offer the chance for students to sit the L6 Cambridge Challenge and the Chemistry Olympiad in Year 13.

Q. What facilities are there?

Chemistry is studied in two well-equipped laboratories where experimental work is an important part of the course. Students are provided with the opportunity to complete individual work and to develop their practical skills to a high standard. Students should note that they will be required to provide their own laboratory coat for all practical sessions.

Exam Board Specification

AQA GCE Advanced Chemistry (7405) www.aqa.org.uk

CRGS Sixth Form Admissions

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