

Type of course – A Level

Course Overview

The course content provided by DAA will provide numerous experiences for all students including: stimulating your interest in Chemistry, developing an appreciation of social, economic and environmental advancements through the application of Chemistry concepts, also to develop your ability to acquire knowledge through experimental work. Students will be studying exciting subjects such as organic and inorganic Chemistry focusing on naturally occurring materials and made materials produced through astonishing technological advancements, atoms, bonding and so much more.

Course Content

- 3.1 Physical chemistry
 - 3.1.1 Atomic structure
 - 3.1.2 Amount of substance
 - 3.1.3 Bonding
 - 3.1.4 Energetics
 - 3.1.5 Kinetics
 - 3.1.6 Chemical equilibria, Le Chatelier's principal and K_c
 - 3.1.7 Oxidation, reduction and redox equations
 - 3.1.8 Thermodynamics
 - 3.1.9 Rate equations
 - 3.1.10 Equilibrium constant K_p for homogeneous systems
 - 3.1.11 Electrode potentials and electrochemical cells
 - 3.1.12 Acids and bases
- 3.2 Inorganic chemistry
 - 3.2.1 Periodicity
 - 3.2.2 Group 2, the alkaline earth metals

- 3.2.3 Group 7(17), the halogens
- 3.2.4 Properties of period 3 elements and their oxides
- 3.2.5 Transition metals
- 3.2.6 Reactions of ions in aqueous solution
- 3.3 Organic chemistry
 - 3.3.1 Introduction to organic chemistry
 - 3.3.2 Alkanes
 - 3.3.3 Halogenoalkanes
 - 3.3.4 Alkenes
 - 3.3.5 Alcohols
 - 3.3.6 Organic analysis
 - 3.3.7 Optical isomerism
 - 3.3.8 Aldehydes and ketones
 - 3.3.9 Carboxylic acids and derivatives
 - 3.3.10 Aromatic chemistry
 - 3.3.11 Amines
 - 3.3.12 Polymers
 - 3.3.13 Amino acids, proteins and DNA
 - 3.3.14 Organic synthesis
 - 3.3.15 Nuclear magnetic resonance spectroscopy
 - 3.3.16 Chromatography

Assessment

Paper 1: What's assessed

- Relevant Physical chemistry topics (sections 3.1.1 to 3.1.4, 3.1.6 to 3.1.8 and 3.1.10 to 3.1.12)
- Inorganic chemistry (section 3.2)
- Relevant practical skills

How its assessed

- Written exam: 2 hours
- 105 marks
- 35% of A Level grade

Paper 2: What's assessed

- Relevant Physical chemistry topics (sections 3.1.2 to 3.1.6 and 3.1.9)
- Organic chemistry (section 3.3)
- Relevant skills

How its assessed

- Written exam: 2 hours
- 105 marks
- 35% of A Level Grade

Paper 3: What's assessed

- Any content
- Any practical skills

How its assessed

- Written exam
- 90 marks
- 30% of A Level grade

A level practical skills to be assessed via endorsement:

a minimum of 12 practical activities to be carried out by each student, which together meet the requirements from the prescribed subject content, published by the department for education. The required practical activities will be defined by each awarding organisation.

Careers and Opportunities for Further Study

- Medicine
- Engineering
- Consultancy
- Teaching
- Construction
- Chemistry
- Biochemical Sciences
- Scientific research
- Optometry
- Pharmacy
- Dentistry
- Geotechnics

Entry Requirements

Minimum grade 6 in Science, grade 6 in Maths and grade 5 in English Language