



## AS Level / A Level Chemistry (Full-Time)

The AS Level / A Level Chemistry a Full-time Further Education course designed for students who are interested in science and have aspirations to work as a chemist or within the field of chemistry. This is located in the Sixth Form Academy (SFA).

Chemistry is a fascinating subject and if you want insight into the workings of the world, then this is the right subject for you. You will pick up a vast amount of knowledge ranging from Radioactivity to Organic Chemistry and our effective laboratory sessions will provide you with knowledge of how to assess compounds and make products such as aspirin.

The course will also help learners to think analytically and logically. The College has one of the best-equipped departments in the area and a consistent record of excellent results.

Applying for A-Levels? Click Apply Now on any ONE of the subjects you are interested in studying, complete the online application form and then book an Information Evening to meet the tutors and discuss your preferred choices. You can then choose your subjects on the night!

### Entry Requirements

A minimum of six GCSEs at Grade C or above including English, Grade B in higher or intermediate tier Mathematics, Grade B in higher tier Core Science and Additional Science or Triple Science.

### Career Prospects

The course provides a good foundation for further study of Chemistry, and related subjects including Medicine, Agriculture, Archaeology, Ecology, Engineering, Biochemistry, Geo Chemistry and many more in higher education.

### Course Modules

AS Specification -

UNIT 1: The language of Chemistry, Structure of Matter and Simple Reactions. Formulae and Equations, Basic

Coleg Afan	<b>01639 648200</b>	Afan College
Coleg Bannau Brycheiniog	<b>01686 614400</b>	Brecon Beacons College
Coleg Castell-nedd	<b>01639 648000</b>	Neath College
Coleg Y Drenewydd	<b>01686 614200</b>	Newtown College



Ideas about Atoms, Chemical Calculations, Bonding, Solid Structures, The Periodic Table, Simple Equilibria and Acid-Base Reactions. AS Specification

UNIT 2: Energy Rate and Chemistry of Carbon Compounds, 2.1 Thermochemistry, 2.2 Rates of Reaction, 2.3 The wider impact of chemistry, 2.4 Organic Compounds, 2.5 Hydrocarbons, 2.6 Halogen alkanes, 2.7 Alcohols and Carboxylic Acids, 2.8 Instrumental Analysis, Practical work is integrated throughout the course and questions may arise in the written papers.

A2 Specification -

UNIT 3: Physical and Inorganic Chemistry, Topic 3.1 Redox and Standard Electrode Potentials, Topic 3.2 Redox Reactions, Topic 3.3 Chemistry of the p-block, Topic 3.4 Chemistry of the d-block transition metals, Topic 3.5 Chemical Kinetics, Topic 3.6 Enthalpy Changes for Solids and Solutions, Topic 3.7 Entropy and Feasibility of reactions, Topic 3.8 Equilibrium Constants, Topic 3.9 Acid-Base Equilibria

UNIT 4: Organic Chemistry and Analysis, Topic 4.1 Stereoisomerism, Topic 4.2 Aromaticity, Topic 4.3 Alcohols and Phenols, Topic 4.4 Aldehydes and Ketones, Topic 4.5 Carboxylic Acids and their derivatives, Topic 4.6 Amines, Topic 4.7 Amino acids, peptides and proteins, Topic 4.8 Organic Synthesis and Analysis

UNIT 5: Practical - This is broken down into two tasks: Experimental task ( 5%), Practical methods and analysis written paper (5%).

## Assessment

Unit 1: Written exam; 1 hour 30 minutes - 20% of qualification.

Unit 2: Written exam; 1 hour 30 minutes - 20% qualification.

Unit 3: Written examination; 1hr 45mins - 25% qualification.

Unit 4: Written examination; 1hr 45mins - 25% qualification.

Unit 5: Practical Assessment 10% qualification

## Additional Costs

Lab coats and goggles are required for this course. Total cost: approximately £17.

## STUDY MODE

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## LOCATION

Neath College - 01639 648000

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## **COURSE LENGTH**

2 years

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