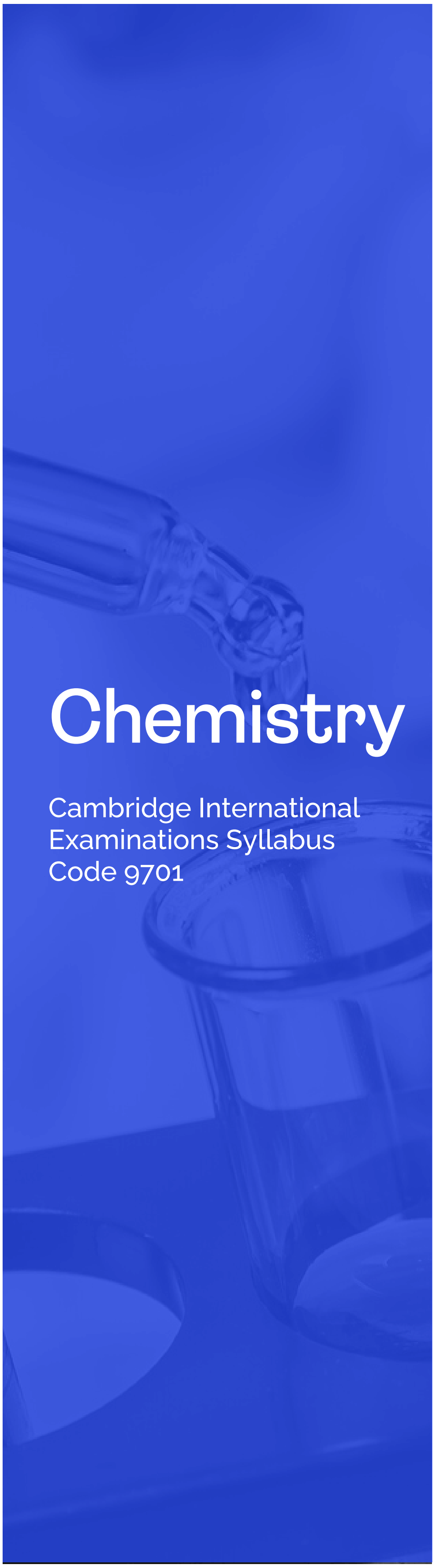
TENBY SCHOOLS SETIA ECO PARK | iSP International Schools Partnership



Chemistry

Cambridge International Examinations Syllabus Code 9701

IGCSEs needed

Students will need to have an IGCSE grade of **A*, A or B** or its equivalent in Chemistry.

Course Overview

Cambridge International AS and A Level Chemistry builds on the skills acquired at Cambridge IGCSE (or equivalent) level. The course includes the combination of theoretical concepts which are fundamental to this subject, current applications of chemistry in the world and a strong emphasis on advanced practical skills. Practical skills are assessed in a timetabled practical examination.

The emphasis throughout this course is on progressing from understanding the concepts in Chemistry, apply chemistry ideas in novel contexts and then acquiring a strong knowledge of Chemistry. Students in this course are exposed to various areas that involve Chemistry. Throughout this course in Chemistry students are exposed to learning Chemistry that stimulates creative thinking and problem-solving skills, which are transferable to any future career path. Cambridge International AS and A Level Chemistry course is ideal for learners who would love to further their studies in chemistry or pursue a career in science/medicine.

Syllabus Units/Topics

AS Level subject content

Candidates for Cambridge International AS Level Chemistry study the following topics:

Physical chemistry

1 Atomic structure
2 Atoms, molecules and stoichiometry
3 Chemical bonding
4 States of matter
5 Chemical energetics
6 Electrochemistry
7 Equilibria
8 Reaction kinetics

Inorganic chemistry

9 The Periodic Table: chemical periodicity
10 Group 2
11 Group 17
12 Nitrogen and sulfur

Organic chemistry

13 An introduction to AS Level organic chemistry
14 Hydrocarbons
15 Halogen compounds
16 Hydroxy compounds
17 Carbonyl compounds
18 Carboxylic acids and derivatives
19 Nitrogen compounds
20 Polymerisation
21 Organic synthesis

Analysis

22 Analytical techniques

A Level subject content

Candidates for Cambridge International A Level Chemistry study the AS topics and the following topics:

Physical chemistry

23 Chemical energetics
24 Electrochemistry
25 Equilibria
26 Reaction kinetics

Inorganic chemistry

27 Group 2
28 Chemistry of transition elements

Organic chemistry

29 An introduction to A Level organic chemistry
30 Hydrocarbons
31 Halogen compounds
32 Hydroxy compounds
33 Carboxylic acids and derivatives
34 Nitrogen compounds
35 Polymerisation
36 Organic synthesis

Analysis

37 Analytical techniques

A Level candidates also study practical skills.

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Assessment Details

Paper 1	
Multiple Choice	1 hour 15 minutes
40 marks	
40 multiple-choice questions	
Questions are based on the AS Level syllabus content.	
Externally assessed	
31% of the AS Level	
15.5% of the A Level	

Paper 2	
AS Level Structured Questions	1 hour 15 minutes
60 marks	
Structured questions	
Questions are based on the AS Level syllabus content.	
Externally assessed	
46% of the AS Level	
23% of the A Level	

Paper 3	
Advanced Practical Skills	2 hours
40 marks	
Practical work and structured questions	
Questions are based on the experimental skills in the Practical assessment section of the syllabus.	
Externally assessed	
23% of the AS Level	
11.5% of the A Level	

Paper 4	
A Level Structured Questions	2 hours
100 marks	
Structured questions	
Questions are based on the A Level syllabus content; knowledge of material from the AS Level syllabus content will be required.	
Externally assessed	
38.5% of the A Level	

Paper 5	
Planning, Analysis and Evaluation	1 hour 15 minutes
30 marks	
Questions based on the experimental skills of planning, analysis and evaluation.	
The context of the questions may be outside the syllabus content.	
Externally assessed	
11.5% of the A Level	

Skills Developed

1. Knowledge and understanding

Candidates will be able to demonstrate knowledge and understanding of:

- scientific phenomena, facts, laws, definitions, concepts and theories
- scientific vocabulary, terminology and conventions (including symbols, quantities and units)
- scientific instruments and apparatus, including techniques of operation and aspects of safety
- experimental quantities and their determination
- scientific and technological applications with their social, economic and environmental implications
- reasoned explanations for phenomena, patterns and relationships.