

# IB CHEMISTRY

## Entry Requirements

Boys wishing to study Higher Level Chemistry are required to get a minimum of a grade 7 at IGCSE/GCSE Chemistry (or 87 if studying Double Award Science). At least a grade 6 is required for Standard Level.

Introduction

The IB Chemistry courses are linear courses, with written exams in the May of the second year of study. At both Standard and Higher Levels, 20% of the final mark is set aside for internal assessment, which takes a minimum of 40 (SL) or 60 (HL) hours, and therefore represents a large commitment. Chemistry is offered in both Groups 4 and 6 at Bedford School and it is therefore possible to study it and another science within our curriculum.

Syllabus content

Students study the following core subjects:

| Standard (SL)                   |
|---------------------------------|
| Quantitative chemistry          |
| Atomic structure                |
| Periodicity                     |
| Bonding                         |
| Energetics                      |
| Kinetics                        |
| Equilibrium                     |
| Acids and bases                 |
| Oxidation and reduction         |
| Organic chemistry               |
| Measurement and data processing |

| Higher (HL)              |
|--------------------------|
| Atomic structure         |
| Periodicity              |
| Bonding                  |
| Energetics               |
| Kinetics                 |
| Equilibrium              |
| Acids and bases          |
| Oxidation and reduction  |
| Organic chemistry        |
| Measurement and analysis |

Plus one option topic from:

| Standard (SL) & Higher (HL) |
|-----------------------------|
| Materials                   |
| Biochemistry                |
| Energy                      |
| Medicinal chemistry         |

Assessed coursework is fully integrated within the practical work of each topic in the programme of study. Here the students will have the opportunity to develop a detailed and extensive Practical Investigation portfolio. HL students are expected to carry out 60 hours of practical work throughout the course; SL students are expected to carry out 40 hours. Assessed work is marked on the following criteria; Personal engagement, Exploration, Analysis, Evaluation, Communication.

IB students are required to complete a “Group 4” project, during which they collaborate with other scientists from the full range of subjects. Throughout the programme, their personal skills, ability to work independently and awareness of wider ethical aspects of the subject are assessed.

### External Assessment

The assessment structure is almost identical for SL and HL and is broken down as follows:

20% from Internal Assessment of practical work (externally moderated)

80% from three written examinations: Paper 1: multiple choice questions (20%)

Paper 2: Structured and extended response questions on core. (HL - 36%, SL – 40%)

Paper 3: Structured and extended response questions on core and option topic

(HL - 24%, SL – 20%)

These scores are aggregated to give a total mark.