

Course Outline: IB Chemistry (HL)

Course Text: Petrucci and Harwood “General Chemistry”

<u>Grade weightings:</u> Knowledge/Understanding	= 35 %
Thinking/Inquiry	= 30 %
Communication	= 15 %
Making Connections	= 20 %
Summative	= 5 %
Exam	= 25 %

IB HL Chemistry Syllabus:

IB Topic number	Title	N° of Hrs: Core (80hrs)	N° of Hrs: HL (55hrs)
Core, HL	Quantitative Chemistry & States of Matter	12.5	3
2 12	Structure	4	4
3 13	Periodicity	6	–
4 14	Bonding	12.5	5
5 15	Energetics	8	8
6 16	Kinetics	5	6
7 17	Equilibrium	5	4
8 18	Acids and Bases	6	10
9 19	Oxidation and Reduction	7	5
10 20	Organic Chemistry	12	10
11	Measurement & Data Processing	2	–
IB HL Options (Grade 12)			
A	Modern Analytical Chemistry	44 Hours	
B	Human Biochemistry		
C	Chemistry in Industry and Technology		
D	Medicines and Drugs		
E	Environmental Chemistry		
F	Food Chemistry		
G	Further Organic Chemistry		

In grade 12, students will complete a Group 4 Project – an independent research project involving 10 - 15 hours of lab work.

Lab Reports and IB Internal Assessment

All IB students must submit a portfolio of the lab reports as part of the assessment for their final IB chemistry grade.

This portfolio is worth 24% of the total grade. Thus, it is very important that the portfolio is up to date and well organized. The assessment criteria are as follows:

Criterion	# of Assessments	# of Possible Marks	Aspects
Design (D)	X 2	12	<ul style="list-style-type: none">Defining the problem and selecting variablesControlling variablesDeveloping a method for collection of data
Data Collection and Processing (DCP)	X 2	12	<ul style="list-style-type: none">Recording raw dataProcessing raw dataPresenting processed data
Conclusion and Evaluation (CE)	X 2	12	<ul style="list-style-type: none">ConcludingEvaluating procedure(s)Improving the investigation
Manipulative Skills (MS)	X 1	6	<ul style="list-style-type: none">Following instructionsCarrying out techniquesWorking safely
Personal Skills (PS) (Group 4 Project)	X 1	6	<ul style="list-style-type: none">Self motivation and perseveranceWorking within a teamSelf reflection

For each criterion, a level of 0 - 2 is awarded, based on the IBO's own rubrics and "achievement level matrices" (these will be provided to students separately).

The first three criteria – Design (D), data collection (DCP) and conclusion and evaluation (CE) – are each assessed twice.

Manipulative skills (MS) are assessed summatively over the whole course and the assessment is based on a wide range of manipulative skills.

Personal skills (PS) will be assessed only once during the group 4 project. The final IB grade for the lab portfolio is based on the two best performances achieved for each criterion during the course.

The maximum mark for each criterion is 6 (respectively three completes). This makes a total mark out of 48. The marks for each of the criteria are added together to determine the final mark out of 48 for the IA component.

This is then scaled at IBCA to give a total out of 24%.

Note: Not all lab reports will be assessed for all IB criteria.

IB External Examination Format

Component	Format	Duration (hrs)	Weighting (%)
Paper 1	40 multiple choice questions about Topics 1-20	1	20%
Paper 2	Section A: Data-based question and several short answer questions about Topics 1-20 Section B: Two (from four) extended answer questions about Topic 1-20	2.25	36%
Paper 3	Several short answer questions and one extended answer question about each of the Options A → G	1.25	20%