

Comparison between HKDSE and International A-level - Chemistry

HKDSE Chemistry comprises of 2 papers; a paper on the compulsory sections and a paper on the elective sections. As the HKDSE syllabus does not consist of units like International A-level, both syllabuses are compared as a whole.

The HKDSE syllabus is similar the IGCSE syllabus and IAL syllabus together with some topics not covered in much depth. Below we have listed out some topics in the IAL syllabus but not in in the HKDSE syllabus.

If you have further enquiries, please contact ITS at +852 2116 3916 or by email at info@itseducation.asia. ITS Education Asia is a full Edexcel academic centre in Hong Kong (Centre Number 92885). Further consultation is completely free of charge. You might also refer to the following FAQ page from ITS Education Asia <http://www.itseducation.asia/UK-faqs.htm>

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| Atomic structure | Periodic trends of ionisation energies, ionic radii, melting points. Use of sub-shell terminology (i.e 1s 2s 2p). Evidence of subshells from ionisation energy graphs. |
| Energetics | Construction of Born-Haber cycles and explaining when this model breaks down. Entropy and related information. |
| Bonding | Polarisation of ions (degree of covalent character). Intermolecular force (permanent dipole-permanent dipole). |
| Organic | Details relating on hazards and risks. Reaction mechanisms (electrophilic addition, nucleophilic substitution). Alcohols reacting with sodium. Reaction of halogenoalkanes (elimination to form alkenes, reaction with ammonia to form amines, rates of halogenoalkane reactions). Reaction of carbonyl compounds with related mechanisms. Benzene chemistry and all reactions related to benzene. |
| Redox | Disproportionation reactions. Calculating Ecell for voltaic cells. |
| Inorganic | Group 2 chemistry (solubility of hydroxides and sulphates and thermal stability of carbonates). Percentage uncertainty, accuracy, precision and reliability. Group 7 and reaction of halides. Iodine thiosulphate titrations. Transition metal chemistry (ligands, shapes, ligand exchange). |
| Rates | Maxwell-Boltzmann distribution, order of reaction, Arrhenius equation are in the elective course of the HKDSE. Rate determining step. |
| Analytical | IR, NMR, Mass spectrometry are in the elective course of the HKDSE. |
| Environment | Green chemistry is only very briefly mentioned in the elective course of the HKDSE. |

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| | CFCs & HCFCs, radical reaction with ozone layer, greenhouse gases, global warming, carbon neutrality and carbon footprint. |
| Acid/base | Ka, pKa, Kw, pKw Calculating pH of weak acids and buffer solutions. |

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