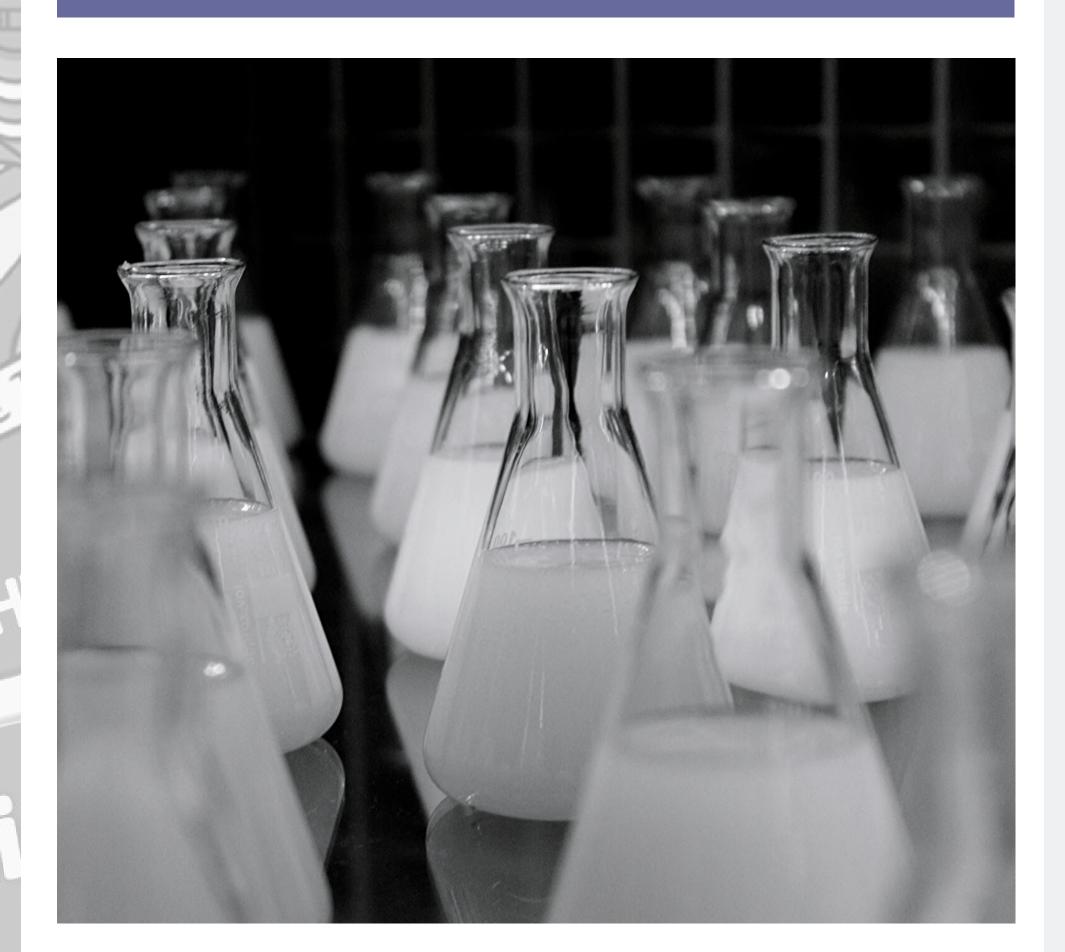
# Chemistry Advanced Higher

Recommended Entry Requirements





## **Course Content**

### **Inorganic chemistry**

- electromagnetic radiation and atomic spectra
- atomic orbitals
- electronic configurations and the periodic table
- transition metals

## **Physical chemistry**

- chemical equilibrium
- reaction feasibility
- kinetics

## Organic chemistry and instrumental analysis

- molecular orbitals
- synthesis
- stereo chemistry
- experimental determination of structure
- pharmaceutical chemistry

## **Researching chemistry**

- common chemical apparatus
- skills involved in experimental work
- stoichiometric calculations
- gravimetric analysis
- volumetric analysis
- practical skills and techniques

# Skills Developed

- extending and applying knowledge of chemistry to new situations, interpreting and analysing information to solve complex problems
- planning and designing chemical experiments/investigations, including risk assessments, to make a discovery, demonstrate a known fact, illustrate particular effects or test a hypothesis
- carrying out complex experiments in chemistry safely, recording systematic detailed observations and collecting data
- selecting information from a variety of sources and presenting detailed information appropriately, in a variety of forms
- processing and analysing chemical information and data (using calculations, significant figures and units, where appropriate)
- making reasoned predictions and generalisations from a range of evidence and/or information
- drawing valid conclusions and giving explanations supported by evidence and/or justification
- critically evaluating experimental procedure by identifying sources of uncertainty and suggesting and implementing improvements drawing on knowledge and understanding of chemistry to make accurate statements, describe complex information, provide detailed explanations and integrate knowledge
- communicating chemical findings and information fully and effectively
- analysing and evaluating scientific publications and media reports

## Assessment

#### **Written Exam**

3 hours in total, 80% of overall grade

#### Project

20% of overall grade

# **Related Careers**

A qualification in Chemistry can lead to careers in medicine, pharmacy, scientific research, environmental protection, engineering and scientific manufacturing (e.g. fragrances, cosmetics).

Cindy Crawford,
Margaret Thatcher,
Dennis Bergkamp and
Angela Merkel all have
degrees relating to
Chemistry!







