

Chemistry T

Rationale

Chemistry is a branch of science that involves the study of all things chemical – chemical processes, chemical compositions and chemical manipulation – in order to better understand the way in which materials are structured, how they change and how they react in certain situations.

'Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is often called the central science, as chemical principles underpin both the physical environment in which we live and all biological systems. Apart from being a subject worthy of study in its own right, chemistry is a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science, and serves as useful preparation for employment.'¹

Curriculum

Students who opt to study Chemistry at ISS In Years 11 and 12 will complete Chemistry T. A prerequisite to this would be a successful completion of the year 10 Science syllabus. As it is an experimental science, the course develops students' understanding and skills practically, improving their research skills, technical skills, quantitative skills and communication skills both orally and written.

Topics included are diverse and based around four units of study:

Unit 1 – Fundamental and Physical Chemistry

Unit 2 – Atomic Structure, Redox and Organic Chemistry

Unit 3 – Chemical bonding and Equilibrium

Unit 4 – Periodicity and Spectroscopy.

There is some flexibility in the course where students can also study Medicinal and Biochemistry or Energy and Materials as alternate to units 3 and 4.

Where does it lead to?

Studying Chemistry helps provide students with opportunities to explain phenomena and solve problems encountered in their ever changing world, understand theories and models used to describe, explain and make predictions about chemical systems, structure and properties and

also develop their ability to critically evaluate and debate scientific arguments and claims in order to solve problems and generate informed, responsible and ethical solutions.¹

A degree in chemistry will provide opportunities in fields such as pharmacology, forensics, research science, medicine, analytical science, chemical engineering and a variety of other areas.

1 BSSS AC Chemistry T, 2015.