

## CHEMISTRY

### What is Chemistry?

The Leaving Cert. course follows directly from Junior Cert Science, and deals with more topics in a lot more depth. The course includes 28 mandatory practical experiments which must be completed in the lab, as well as a written paper including questions on the experiments and examining the theory and applications of chemistry. Chemistry has been the second most popular science subject for some time now, with high levels of achievement.

### Why do Chemistry?

Chemistry exists everywhere not just in laboratories but in every living thing on land and sea and in our bodies. It is often described as 'the central science' containing a lot of formulas. So, if you enjoyed Junior Cert Science and you have done well in this and Maths you should be a good candidate for Leaving Cert Chemistry. Chemistry is an essential element in the study of careers including: Medicine, Dentistry, Veterinary Science, Physiotherapy, Nursing, Pharmacy and Medical Laboratory Technology. The following video will give you a good overview of what the study of chemistry for Leaving Cert is all about and how it might tie in with your future career.

### What kind of student might Chemistry suit?

- Students considering a career in any scientific discipline, such as chemistry, biology, environmental science, medicine, pharmacology, or material science.
- Students who were successful in Junior Cert. Science, particularly in the chemistry section.

### Career Possibilities

Chemistry is considered most useful for careers in Pharmacy, Ag Science, Medicine, Engineering, General Sciences and Biotechnology.

### Third Level Entry Requirements

This subject is a requirement for entry into a number of third level courses. Examples include: Dentistry and Medicine and Pharmacy in UCC, Pharmacy TCD, Human Nutrition and Dietetics in DIT.

While Chemistry might not be an entry requirement for all of the following courses in every third level college (it is in some - see above link) it is highly desirable for the study of the following 3rd level courses.

- Veterinary Medicine
- Pharmacy
- Medicine
- Dentistry
- Human Nutrition
- Biomedical Sciences

### Subject Content

Leaving Cert. Chemistry is comprised of all the essential and relevant topics within general chemistry. The major topics involved include the following:

1. Atomic structure
2. Volumetric analysis
3. Organic chemistry
4. Water chemistry
5. Reaction mechanisms.

There also is an option to be taken as part of the course which involves the study of atmospheric and industrial chemistry or the study of materials and electrochemistry.

Experimental investigations are an essential part of the leaving certificate course. Each student must complete at least 28 experiments over the duration of the course.

Experimental work is examined as part of the leaving cert exam and forms the basis for a minimum of three questions on the exam paper.

### **Exam Structure**

The leaving cert exam is three hours in duration. Each candidate must answer at least two questions from Section A (experimental section) and a minimum of six questions from Section B.

There are eleven questions in total on the exam paper, each carrying fifty marks.

There is no element of continuous assessment but experimental copies must be available for inspection by the State Examinations Commission. Students taking chemistry have to memorize the chemical components of a series of prescribed experiments. They will need to present the elements of four such experiments in their exam.

### **Comments**

- It is recommended that a student undertaking the course has a good understanding of Junior Cert Science at the higher level.
- Each student should have an aptitude and interest for laboratory work.
- A student would be expected to have a reasonable level of Junior Cert Maths, either at higher or ordinary level.