



Access 3 Chemistry — draft Course rationale and summary

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Course rationale

Background

All new and revised National Courses reflect Curriculum for Excellence values, purposes and principles. They offer flexibility, provide more time for learning, more focus on skills and applying learning, and scope for personalisation and choice.

In this Course, and its component Units, there will be an emphasis on skills development and the application of those skills. Assessment approaches will be proportionate, fit for purpose and will promote best practice, enabling learners to achieve the highest standards they can.

This Course provides learners with opportunities to continue to acquire and develop the attributes and capabilities of the four capacities as well as skills for learning, skills for life and skills for work.

All Courses provide opportunities for learners to develop breadth, challenge and application, but the focus and balance of the assessment will be appropriate for the subject area.

Relationship between the Course and Curriculum for Excellence values, purposes and principles

Through learning in chemistry, learners develop their interest in the chemistry of the world in an interesting and enjoyable way. They engage in a wide range of investigative tasks which, while fostering an enjoyment of chemistry and learning, allow them to develop important skills in chemistry that will be useful across all sectors of society.

Chemistry Courses should encourage resilience, which leads to becoming a confident individual. Successful learners in chemistry think analytically and independently and solve problems. Chemistry can produce responsible citizens through studying the impact it makes on developing sustainability and its effect on the environment, society, and on the lives of themselves and others.

The Access 3 Chemistry Course allows learners to find out about and investigate the world. It develops learners' ability to think analytically, and independently, and to make basic evaluations. The Course will allow opportunities for learners to acquire and apply knowledge to evaluate environmental and scientific issues and assess risk. This leads to the learner developing an informed and ethical view of issues. Learners will be able to develop their communication and collaborative working, and be able to apply thinking in familiar contexts to solve problems.

Purpose and aims of the Course

The Course is practical and experiential, and develops scientific knowledge of issues relating to chemistry. The Course may be delivered using contexts to develop concepts within an application-led approach, where learners start with the product and work backwards to develop the underlying chemistry. It is important that everyone has an informed view of science.

Access 3 Chemistry is a practical-based Course, which develops skills in the learners through the study of the applications of chemistry in an everyday context. By using a skills-based approach to developing knowledge of some straightforward chemistry concepts, learners will become scientifically literate citizens, able to review the science-based claims which they will come across in a rapidly developing society.

The Course develops learners' interest and enthusiasm for chemistry through a variety of contexts relevant to chemistry's impact on society, namely utilising nature's resources, chemical reactions, and the chemistry in everyday life. It offers a broad, versatile and adaptable skills set which is valued in the workplace and forms the basis for progress onto Chemistry (National 4), while also providing a knowledge base which is useful for the study of all the sciences.

The main aims of the Course are for learners to:

- ◆ develop scientific thinking skills in a chemistry context
- ◆ develop an understanding of chemistry's role in scientific issues
- ◆ apply knowledge and understanding of chemistry concepts
- ◆ develop basic problem solving skills in a chemistry context
- ◆ develop understanding of relevant applications of chemistry in society

The Course provides opportunities for learners to improve their scientific literacy, numeracy and literacy skills. In addition, learners will recognise the impact chemistry makes on developing sustainability, and its effects on the environment, on society, and on the lives of themselves and others.

Learners will develop relevant skills for learning, for use in everyday life, and for employment.

Information about typical learners who might do the Course

The Course is suitable for learners who have experienced learning across the Third level sciences experiences and outcomes. The Course may be suitable for those wishing to study chemistry for the first time.

This Course has a skills-based approach to learning. It takes account of the needs of all learners and provides sufficient flexibility to enable learners to achieve in different ways.

On successful completion of this Course, the learner could progress to:

- ◆ Chemistry (National 4) Course
- ◆ Access 3 or National 4 in another science subject
- ◆ Skills for Work Course (SCQF level 3 or 4)
- ◆ National Certificate Group Awards
- ◆ National Progression Awards (SCQF level 3 or 4)
- ◆ employment

Course summary

Course title: Access 3 Chemistry

SCQF level 3 (18 SCQF credit points)

Course outline

Mandatory Units

Chemistry: Atoms, Acids and Alkalis	(6 SCQF credit points)
Chemistry: Nature's Chemistry	(6 SCQF credit points)
Chemistry: Chemistry in Society	(6 SCQF credit points)

Course structure and conditions of award

The Course is practical and experiential, developing skills in a chemical context and an application-led manner.

Through a variety of real-life contexts, learners will acquire and apply knowledge of chemical concepts and develop this through an application-led approach, including practical activities.

As well as developing scientific skills, learners will also gain valuable transferable skills for learning, life and work, such as literacy and numeracy.

The Course will be delivered using contexts to develop concepts within an application-led approach, where learners start with the product and work backwards to develop the underlying chemistry. All Units will be practical, experiential and contextual. Through this process, the concepts of sustainability, ethics, and the balance between benefit and cost will be addressed.

Units are statements of standards for assessment and not programmes of learning and teaching. They can be delivered in a variety of ways.

Chemistry: Atoms, Acids and Alkalis (Access 3)

In this Unit, learners will develop scientific skills and knowledge of basic chemical concepts. From the starting point of the chemistry of elements, compounds and mixtures, learners will work towards basic word equations. Through practical experience, learners will study the basic reactions of acids and alkalis and how this chemistry is involved in our everyday life.

Chemistry: Nature's Chemistry (Access 3)

In this Unit, learners will use everyday products such as cosmetics, fuel and food to develop skills and knowledge of the applications of chemistry to everyday life. At the same time, consideration will be given to the environmental and ethical implications of consumer chemistry.

successful learner, confident individual, responsible citizen, effective contributor

Chemistry: Chemistry in Society (Access 3)

Learners will develop scientific skills and knowledge through investigating metals, their corrosion, and their use in the production of electricity. The development and use of new smart materials and concepts of sustainability are researched, with an emphasis on environmental issues.

To achieve the Access 3 Chemistry Course, learners must pass all of the required Units. The required Units are shown in the Course outline section.

Access 3 Courses are not graded.

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Assessment

All Units are internally assessed against the requirements shown in Unit specifications.

They will be assessed pass/fail within centres.

SQA will provide rigorous external quality assurance, including external verification, to ensure assessment judgements are consistent and meet national standards.

Exemplification of possible assessment approaches for Units will be provided in the *National Assessment Resource*.

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