

The National 3 / 4 Course gives opportunities for learners to develop the ability to think analytically, creatively and independently, and to make evaluations. The Course covers a variety of contexts relevant to chemistry's impact on the environment and society through the chemistry of the Earth's resources, the chemistry of everyday products and environmental analysis. The Course allows flexibility and personalisation by offering choice in the contexts studied.

The key areas of atomic structure, bonding and chemical equations are integrated throughout the Course. It offers a broad, versatile and adaptable skill set which is valued in the workplace, and forms the basis for study of chemistry at a higher level, while also providing a knowledge base useful in the study of all of the sciences.

The purpose of the National 5 Course is to develop learners' curiosity, interest and enthusiasm for chemistry in a range of contexts. The key skills of scientific inquiry and investigation are integrated and developed throughout the Course. The relevance of chemistry is highlighted by the study of the applications of chemistry in everyday contexts. This will enable learners to become scientifically literate citizens, able to review the science-based claims they will meet. The Course covers a variety of contexts relevant to chemistry's impact on the environment and society through the chemistry of the Earth's resources, the chemistry of everyday products and environmental analysis. The Course allows flexibility and personalisation by offering choice in the contexts studied. The key areas of bonding, the mole and balanced chemical equations are integrated throughout the Course.

The purpose of the Higher Course is to develop learners' curiosity, interest and enthusiasm for chemistry in a range of contexts. The skills of scientific inquiry and investigation are developed throughout the Course. The relevance of chemistry is highlighted by the study of the applications of chemistry in everyday contexts. This will enable learners to become scientifically literate citizens, able to review the science-based claims they will meet. The Course develops scientific understanding of issues relating to chemistry, and uses the development of chemical theory to build an extensive set of skills for learners. Through application of a detailed knowledge and understanding of chemical concepts, in practical situations, learners develop an appreciation of the impact of chemistry on their everyday lives. The Course gives the opportunities for learners to develop the ability to think analytically, creatively and independently, and to make reasoned evaluations.

The purpose of the Advanced Higher Chemistry Course is to develop learners' knowledge and understanding of the physical and natural environments beyond Higher level. The Course builds on Higher Chemistry, continuing to develop the underlying theories of chemistry and the practical skills used in the chemistry laboratory. The Course also develops the skills of independent study and thought that are essential in a wide range of occupations.

NATIONAL 3/4 CHEMISTRY	
REQUIREMENTS	Offered to all pupils in S4, S5 or S6. No prior knowledge is required.
COURSE CONTENT	<p>The course consists of three units of approximately the same length:</p> <ul style="list-style-type: none"> <li>• Chemistry in Society</li> <li>• Nature's Chemistry</li> <li>• Chemical Changes and Structure</li> </ul>
ASSESSMENT	<p>Pupils are required to complete:</p> <ul style="list-style-type: none"> <li>• An end of unit assessment for each unit studied.</li> <li>• A short report relating to one of the units covered, describing the application of Chemistry in a particular area and its effect on Society.</li> <li>• A practical investigation and a written report, which is internally assessed.</li> <li>• A research assignment.</li> </ul> <p>Candidates must pass all internal assessments (written and practical) to be awarded a National 4 Chemistry pass.</p>
PROGRESSION / NEXT STEPS	<p>A pass in this course will allow progression into other Science subjects at National 4 level. A pass in National 4 Chemistry will provide opportunity for progression into National 5 Laboratory Skills.</p> <p>Pupils may wish to discuss relevant work experience/placements with Faculty staff and their Guidance Teacher.</p>

NATIONAL 5 CHEMISTRY	
REQUIREMENTS	This course is offered to all pupils in S4, S5 or S6. Pupils are expected to have completed the S3 Chemistry course and achieved Level 4.
COURSE CONTENT	<p>The course consists of three units of approximately the same length:</p> <ul style="list-style-type: none"> <li>• Chemistry in Society</li> <li>• Nature's Chemistry</li> <li>• Chemical Changes and Structure</li> </ul> <p>Each unit builds upon and extends the fundamental concepts of Chemistry introduced in S3 Chemistry.</p>
ASSESSMENT	<p>Pupils are required to complete:</p> <ul style="list-style-type: none"> <li>• An end of unit assessment for each unit studied.</li> <li>• A short report relating to one of the units covered, describing the application of Chemistry in a particular area and its effect on Society.</li> <li>• A practical investigation and a written report, which is internally assessed.</li> <li>• An externally assessed research assignment. This counts as 20% of the final grade awarded.</li> <li>• The SQA's written external exam is 2 hours long. This counts as 80% of the final grade awarded.</li> </ul> <p>Candidates must pass the SQA exam to be awarded a National 5 Chemistry pass.</p>
PROGRESSION / NEXT STEPS	<p>A good pass in National 5 Chemistry will provide opportunity for progression into Higher Chemistry or a different Science subject at National 5 level.</p> <p>Pupils may wish to discuss relevant work experience/placements with Faculty staff and their Guidance Teacher.</p>

HIGHER CHEMISTRY	
REQUIREMENTS	This course is offered to S5 and S6 Pupils who have a pass in National 5 Chemistry at either Grade A or Grade B and also a pass in National 5 Mathematics at either Grade A or Grade B.
COURSE CONTENT	<p>The Higher Chemistry course has three mandatory units:</p> <ul style="list-style-type: none"> <li>• Chemistry in Society</li> <li>• Natures Chemistry</li> <li>• Chemical Changes and Structure</li> </ul> <p>Each unit builds upon and extends the fundamental concepts of Chemistry introduced at National 5.</p>
ASSESSMENT	<p>Internal Assessment</p> <ul style="list-style-type: none"> <li>• At the end of each Unit a written exam will be given. These are important as the candidate must pass each, in addition to the external exam at the end of the course. Candidates who fail to pass a Unit exam are given one resit opportunity</li> <li>• Practical Abilities will be formally assessed within each unit by testing the students' competence at carrying out and writing a report of a set experimental investigation.</li> </ul> <p>External Assessment</p> <ul style="list-style-type: none"> <li>• Research Assignment: The purpose of the assignment is to assess the application of skills of scientific inquiry and related chemistry knowledge and understanding. This counts as 17% of the final exam.</li> <li>• Exam: The SQA's written external exam is 2<sup>1</sup>/<sub>2</sub> hours long. It is split into two sections: A multiple choice part and a written part. The written paper is composed of both short answer and extended answer responses.</li> </ul> <p>Candidates must pass all internal assessments (written and practical) and the SQA exam to be awarded a Higher Chemistry pass.</p>
PROGRESSION / NEXT STEPS	A pass in Higher Chemistry can be followed by Advanced Higher Chemistry. Higher Chemistry is a very desirable qualification for entry into many Higher /Further Education and relevant engineering apprenticeship (eg OGTAP) courses and will be an essential entry requirement into any Chemistry related course offered by a college or university (for example Chemical Engineering or Process Engineering), as well as those related to medicine, dentistry and veterinary science. Higher Chemistry is also a qualification highly regarded by all employers as it develops the necessary independent and teamworking skills required to achieve success beyond education. Pupils may wish to discuss relevant work experience/placements with Faculty staff and their Guidance Teacher.

ADVANCED HIGHER CHEMISTRY	
REQUIREMENTS	A pass in Higher Chemistry with either Grade A or Grade B and also a pass in Higher Mathematics (grade A and B is preferable).
COURSE CONTENT	<p>The course consists of three mandatory units:</p> <ul style="list-style-type: none"> <li>• Inorganic and Physical Chemistry</li> <li>• Organic Chemistry and Instrumental Analysis</li> <li>• Researching Chemistry</li> </ul> <p>Each unit builds upon and extends the fundamental concepts of Chemistry introduced in Higher Chemistry.</p>
ASSESSMENT	<p>Internal</p> <ul style="list-style-type: none"> <li>• Each unit has a written assessment at the end of it. As in Higher Chemistry, a pupil must pass these, as well as the external written assessment, before they are awarded a grade in the subject.</li> <li>• Practical Abilities will be formally assessed within each unit by testing the students' competence at carrying out and writing a report of a set experimental investigation.</li> </ul> <p>External</p> <ul style="list-style-type: none"> <li>• Research Investigation and Report: An investigation will be marked externally. The investigation report will be required to contain the presentation and analysis of results obtained during the investigation, details of procedure, a conclusion and a critical evaluation. As far as is practicable, the investigation is of the candidate's choosing and design. This counts towards 23% of the final award</li> <li>• Exam Paper</li> </ul> <p>The grade awarded for the course will depend on the total marks obtained for the question paper (total 100 marks) and for the investigation (total 30 marks).</p>
PROGRESSION / NEXT STEPS	<p>Advanced Higher Chemistry is a highly desirable qualification for entry into Higher and Further Education courses, and will be an essential entry requirement into any Chemistry related course offered by a college or university such as Chemical Engineering or Process Engineering, as well as those related to medicine, dentistry and veterinary science. It will provide entry into relevant Higher Education Courses and prepare pupils for their first year at University, especially those wishing to study Science based courses, not just Chemistry. For those not choosing Higher Education, Advanced Higher Chemistry is a qualification highly regarded by all employers as it develops the necessary independent and team working skills required to achieve success beyond education.</p>