

Mathematics is important in everyday life. It allows us to make sense of the world around us and to manage our lives. Using mathematics allows us to model real-life situations and equips us with the skills we need to interpret and analyse information, simplify and solve problems and make informed decisions. The learning of mathematics also develops logical reasoning, analysis and the ability to think in abstract ways.

The development of mathematical skills and application of mathematical techniques in context will be furthered by exploiting the power of calculators and computer software where appropriate. Pupils will be required to purchase a scientific calculator for their own use (we recommend the Casio FX83GT).

The Mathematics courses are designed to build upon and extend students' mathematical knowledge from the Broad General Education in S1-S3 and to offer mathematical progression within the National Qualifications Framework. They cover the operational skills involved in algebra, geometry, trigonometry and statistics and also aid the development of reasoning (investigation, problem-solving, analysis and modelling) and numeracy skills (number process and information handling).

Mathematics is available at National 4, National 5, Higher and Advanced Higher levels. Further information on the Mathematics courses can be found on the SQA website see <http://www.sqa.org.uk/sqa/45750.html>).

| Mathematics N4 | | | | | | | |
|---------------------------------|---|----------------|----------------|---------|------------|----------------|----------------------|
| REQUIREMENTS | Students following this course are expected to have attained CfE Mathematics at Third Level or equivalent. | | | | | | |
| COURSE CONTENT | <p>The course comprises three Units of study:</p> <ul style="list-style-type: none"> • Expressions and Formulae • Relationships • Numeracy | | | | | | |
| ASSESSMENT | <p>The Units are assessed internally. There is also an additional Added Value Unit in the form of a test which will sample the skills, knowledge and understanding of the course. The Added Value Unit consists of two papers:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 50%;">Paper 1</td> <td style="text-align: center; width: 50%;">Paper 2</td> </tr> <tr> <td style="text-align: center;">20 mins</td> <td style="text-align: center;">40 minutes</td> </tr> <tr> <td style="text-align: center;">non-calculator</td> <td style="text-align: center;">calculator permitted</td> </tr> </table> <p>To achieve the National 4 course, students must pass all of the required Units, including the Added Value Unit.</p> | Paper 1 | Paper 2 | 20 mins | 40 minutes | non-calculator | calculator permitted |
| Paper 1 | Paper 2 | | | | | | |
| 20 mins | 40 minutes | | | | | | |
| non-calculator | calculator permitted | | | | | | |
| PROGRESSION / NEXT STEPS | Progression from National 4 Mathematics would be to National 5 Mathematics. | | | | | | |

| Mathematics N5 | | | | | | | |
|---------------------------------|---|----------------|----------------|-------------------|-------------------|----------------|----------------------|
| REQUIREMENTS | Students following this course are expected to have attained CfE Mathematics at Fourth Level, National 4 Mathematics or equivalent. | | | | | | |
| COURSE CONTENT | <p>The course comprises five areas of study:</p> <ul style="list-style-type: none"> • Numerical Skills • Algebraic Skills • Geometrics Skills • Trigonometric Skills • Statistical Skills | | | | | | |
| ASSESSMENT | <p>The course is assessed externally by an exam covering skills, knowledge and understanding of the course. The external Course Assessment consists of two papers:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 50%;">Paper 1</td> <td style="text-align: center; width: 50%;">Paper 2</td> </tr> <tr> <td style="text-align: center;">1 hour 15 minutes</td> <td style="text-align: center;">1 hour 50 minutes</td> </tr> <tr> <td style="text-align: center;">non-calculator</td> <td style="text-align: center;">calculator permitted</td> </tr> </table> <p>The Course Assessment will provide the basis for grading attainment (A-D) in the Course Award.</p> | Paper 1 | Paper 2 | 1 hour 15 minutes | 1 hour 50 minutes | non-calculator | calculator permitted |
| Paper 1 | Paper 2 | | | | | | |
| 1 hour 15 minutes | 1 hour 50 minutes | | | | | | |
| non-calculator | calculator permitted | | | | | | |
| PROGRESSION / NEXT STEPS | <p>Progression from National 5 Mathematics would be to Higher Mathematics.</p> <p>National 5 Mathematics is an entry requirement for many further education and industry training courses.</p> | | | | | | |

| Applications of Mathematics N5 | | | | | | | |
|---------------------------------------|--|----------------|----------------|------------------|---------|----------------|----------------------|
| REQUIREMENTS | Students following this course are expected to have attained CfE Mathematics at Fourth Level, National 4 Mathematics or equivalent. | | | | | | |
| COURSE CONTENT | <p>The course comprises six areas of study</p> <ul style="list-style-type: none"> • Numeracy Skills • Financial Skills • Statistical Skills • Measurement Skills • Geometric Skills • Graphical Data and Probability Skills <p>The National 5 Applications of Mathematics course explores the applications of mathematical techniques and skills in everyday situations, including financial matters, statistics, and measurement. The skills, knowledge and understanding in the course also support learning in other curriculum areas, such as technology, health and wellbeing, science, and social studies.</p> <p>This course is particularly suitable for learners who wish to develop the mathematical reasoning and numerical skills which are useful in other curriculum areas and workplaces.</p> <p>It is increasingly available as an alternative entry requirement to National 5 Mathematics for university or college courses. You should ensure that you have checked whether it will be suitable for your destination.</p> <p>It is not an easy alternative to National 5 Mathematics – while it removes algebra and trigonometry, it does however require a very high level of non-calculator numerical skills for paper 1.</p> | | | | | | |
| ASSESSMENT | <p>The course is assessed externally assessed covering the skills, knowledge and understanding of the course.</p> <p>The external Course Assessment consists of two papers:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Paper 1</td> <td style="text-align: center;">Paper 2</td> </tr> <tr> <td style="text-align: center;">1 hour 5 minutes</td> <td style="text-align: center;">2 hours</td> </tr> <tr> <td style="text-align: center;">non-calculator</td> <td style="text-align: center;">calculator permitted</td> </tr> </table> <p>The Course Assessment will provide the basis for grading attainment (A-D) in the Course Award.</p> | Paper 1 | Paper 2 | 1 hour 5 minutes | 2 hours | non-calculator | calculator permitted |
| Paper 1 | Paper 2 | | | | | | |
| 1 hour 5 minutes | 2 hours | | | | | | |
| non-calculator | calculator permitted | | | | | | |
| PROGRESSION / NEXT STEPS | Progression from National 5 Mathematics would be to Higher Mathematics. | | | | | | |

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| | National 5 Mathematics is an entry requirement for many further education and industry training courses. |
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| Mathematics Higher | | | | | |
|-------------------------------------|---|----------------|----------------|-------------------------------------|--|
| REQUIREMENTS | Students following this course are expected to have attained National 5 Mathematics at Grade A-C or equivalent. | | | | |
| COURSE CONTENT | <p>The course comprises four areas of study:</p> <ul style="list-style-type: none"> • Algebraic and Trigonometric Skills • Geometric Skills • Calculus Skills • Algebraic and Geometric Skills | | | | |
| ASSESSMENT | <p>The course is externally assessed by exam which covers the skills, knowledge and understanding of the course.</p> <p>The external Course Assessment consists of two papers:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Paper 1</td> <td style="text-align: center;">Paper 2</td> </tr> <tr> <td style="text-align: center;">1 hour 30 minutes non-calculator</td> <td style="text-align: center;">1 hour 45minutes calculator permitted</td> </tr> </table> <p>The Course Assessment will provide the basis for grading attainment (A-D) in the Course Award.</p> | Paper 1 | Paper 2 | 1 hour 30 minutes non-calculator | 1 hour 45minutes calculator permitted |
| Paper 1 | Paper 2 | | | | |
| 1 hour 30 minutes non-calculator | 1 hour 45minutes calculator permitted | | | | |
| PROGRESSION / NEXT STEPS | <p>Progression from Higher Mathematics would be to Advanced Higher Mathematics.</p> <p>Pupils may wish to discuss relevant work experience/placements with Faculty staff and their Guidance Teacher.</p> | | | | |

| Mathematics Advanced Higher | | | | | | | |
|------------------------------------|---|----------------|----------------|--------|--------------------|----------------|----------------------|
| REQUIREMENTS | Students following this course are expected to have attained Higher Mathematics at Grade A-C or equivalent. | | | | | | |
| COURSE CONTENT | <p>The course comprises three areas of study:</p> <ul style="list-style-type: none"> • Calculus • Algebra, Proof, and Number Theory • Matrices, Vectors, and Complex Numbers | | | | | | |
| ASSESSMENT | <p>The course is assessed externally by exam which covers the skills, knowledge and understanding of the course.</p> <p>The external Course Assessment consists of two papers:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Paper 1</td> <td style="text-align: center;">Paper 2</td> </tr> <tr> <td style="text-align: center;">1 hour</td> <td style="text-align: center;">2 hours 30 minutes</td> </tr> <tr> <td style="text-align: center;">non-calculator</td> <td style="text-align: center;">calculator permitted</td> </tr> </table> <p>The Course Assessment will provide the basis for grading attainment (A-D) in the Course Award.</p> | Paper 1 | Paper 2 | 1 hour | 2 hours 30 minutes | non-calculator | calculator permitted |
| Paper 1 | Paper 2 | | | | | | |
| 1 hour | 2 hours 30 minutes | | | | | | |
| non-calculator | calculator permitted | | | | | | |
| PROGRESSION / NEXT STEPS | Pupils may wish to discuss relevant work experience/placements with Faculty staff and their Guidance Teacher. | | | | | | |