Mathematics

A-Level Mathematics is an intensive and demanding post-16 option, highly regarded by both universities and employers. It is currently the most popular A-Level choice for students in Northern Ireland.

Entrance requirements

Students must have gained a grade B or above in GCSE Mathematics and a similar grade in GCSE Further Mathematics.

Course Details

The new CCEA A-Level Mathematics course is studied, with students taking two modules in Pure Mathematics and two modules in Applied Mathematics. The Applied modules contain equal weightings of Mechanics and Statistics.

AS	Year 13	Module AS 1: Pure Mathematics Module AS 2: Applied Mathematics
A2	Year 14	Module A2 1: Pure Mathematics Module A2 2: Applied Mathematics

Course Content

Pure
Algebra and Functions
Coordinate Geometry
Sequences and Series
Trigonometry
Exponentials and Logarithms
Differentiation
Integration
Vectors
Numerical Methods

Applied
Kinematics
Forces and Newton's Laws
Moments
Impulse and Momentum

Statistical Sampling
Data Presentation and Interpretation
Probability
Statistical Distributions
Statistical Hypothesis Testing

Scheme of Assessment

Assessment is by examination only, as shown below.

Module	When	Time Allowed	Weighting
AS 1	Summer Year 13	1 hr 45 mins	24%
AS 2	Summer Year 13	1 hr 15 mins	16%
A2 1	Summer Year 14	2 hrs 30 mins	36%
A2 2	Summer Year 14	1 hr 30 mins	24%

AS modules are worth 40% and A2 modules 60% of the total A-Level mark.

Grades A* - E are accessible. To be awarded an A* grade, students need to achieve an A grade on their full A-Level qualification and an average score of at least 90% in the A2 modules.

Career Opportunities

A-Level Mathematics is an essential requirement for entry to courses in higher education that have a high degree of mathematical content. The subject also provides students with general skills that would be useful in other areas of study, such as understanding and analysing problems, thinking through solutions and communicating results.

A-Level Mathematics is highly regarded in many areas of employment, where mathematical expertise is in great demand. This gives students the freedom to choose a career that suits them. Opportunities exist in the fields of finance, commerce, industry, engineering, education, medicine … there really are few limits to the type of career that they could pursue!