Mathematics

A-level Mathematics is an intensive and demanding post-16 option, highly regarded by both universities and employers. It is one of the most popular A-Level courses at Foyle College, taken by between 40 and 50 pupils each year.

Entrance requirements

You should only take AS/A2 Mathematics if you have above average ability in the subject, confirmed by **gaining a grade B or above in GCSE Mathematics <u>and</u> a similar grade in GCSE Further Mathematics.**

Course Details

The Edexcel AS/A2 Mathematics course is studied, with students taking a combination of four modules in Pure Mathematics and two modules in Applied Mathematics.

AS   Year 13   Modules C1, C2 and M1
A2   Year 14   Modules C3, C4 and S1

Course Content

The course is divided into three sections.

Pure Mathematics
(Modules C1-C4)

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

Mechanics
(Module M1)

Kinematics of a Particle
Vectors
Statics of a particle
Dynamics of a Particle
Momentum & Impulse
Moments

Statistics
(Module S1)

Representing & Summarising Data
Correlation and Regression
Probability
Discrete Random Variables
Normal Distribution

Scheme of Assessment

Assessment is by examination only. All modular tests are sat in June. Each module is equally weighted and has a 90 minute examination paper, with approximately ten compulsory questions. Module C1 is the only non-calculator paper. Each module result is reported as a score out of 100 and then combined with the other marks to be converted into a grade. Students may repeat a module test and the highest mark gained is counted towards the total.

AS	Year 13		A2	Year 14
Grade Total 300 Pts			*Grade Total 600 Pts*	
A	240		A	480
B	210		B	420
C	180		C	360
D	150		D	300
E	120		E	240

An A* grade can be obtained at A2 by gaining a minimum of 480 points and an average score of at least 90 points in the C3 and C4 modules.

Career Opportunities

Advanced qualifications are an essential requirement for entry to courses in higher education that have a high degree of mathematical content. They also provide you with general skills – understanding and analysing problems, thinking through solutions and communicating results - that would be useful in other areas of study.

Advanced qualifications are also highly regarded in many areas of employment, where your expertise as a mathematician will be in great demand. This gives you the freedom to choose a career that suits you. Opportunities exist in the fields of finance, commerce, industry, engineering, education, medicine … there really are few limits to the type of career that you could pursue!