



# Education & Children's Services

## Improving Lives Together

Ambition | Compassion | Integrity



# Course Choice Information - Mathematics Higher

## Course Information & Content

This course enables you to build on your previous mathematical experience in the areas of algebra, geometry and trigonometry and introduces you to elementary calculus. This course will develop, deepen and extend the mathematical reasoning skills necessary at this level and beyond. You will acquire and apply operational skills necessary for exploring mathematical ideas through symbolic representation and diagrams.

## Recommended Entry Requirements

Students will be expected to have achieved a **strong** pass at National 5 Maths.

## Course Specification

Three mandatory units are:

- **Expressions and Functions:** In this unit you will develop knowledge and skills that involve the manipulation of expressions, the use of vectors and the study of mathematical functions. You will also cover aspects of algebra, geometry and trigonometry, and skills in mathematical reasoning and modelling.
- **Relationships and Calculus:** In this unit you will develop knowledge and skills that involve solving equations and to introduce both differential calculus and integral calculus. You will also cover aspects of algebra, trigonometry, calculus and skills in mathematical reasoning and modelling.
- **Applications:** In this unit you will develop knowledge and skills that involve geometric applications, applications of sequences and applications of calculus. You will also cover aspects of algebra, geometry, calculus, and also skills in mathematical reasoning and modelling.

## Assessment

An external examination comprising two papers. The first of the two papers will be a non-calculator paper.

## Homework

Regular homework will be set by the class teacher. Students of Higher Mathematics will also be expected to complete their own private study and revision using past papers and other materials provided.

## Progression

Advanced Higher Mathematics | mathematics, engineering, or science HNC/HND or degree course.

## Career Options

Accountant | Actuary | Aeronautical Engineer | Air Traffic Control | Architect | Bookmaker | Civil/Diplomatic Service Worker | Economist | Finance Worker | Insurance Risk Surveyor | Investment Banker | Management Consultant | Software Engineer and Development | Statistician | Stockbroker | Surveyor | System Analyst | Teacher

[Further Information - SQA](#)

