

Advanced Higher Mathematics (Course Code: C847 77)

SCQF Level 7 (32 Credit Points)

Why study Mathematics?

Mathematics is important in everyday life, allowing us to make sense of the world around us and to manage our lives. Using mathematics enables us to model real-life situations and make connections and informed predictions. It equips us with the skills we need to interpret and analyse information, simplify and solve problems, assess risk and make informed decisions.

You will also get to develop skills in the areas of algebra, geometry and trigonometry as well as learn elementary calculus.

The skills you learn in this course are useful in many careers involving engineering, medicine, technology, business and the physical sciences.

What do I need to get in?

This is at the discretion of the school but you would normally be expected to have attained an A or B pass at:

- **Higher Mathematics**

What will I study?

This course develops, deepens and extends the mathematical skills necessary at advanced higher level and beyond. Throughout this course, you will:

- acquire and apply operational skills necessary for exploring complex mathematical ideas
- select and apply mathematical techniques and develop your understanding of the interdependencies within mathematics
- develop mathematical reasoning skills and gain experience in making informed decisions.

You will:

- develop approaches within **Calculus** to integrate and differentiate an increasing variety of functions and apply these skills to solve problems and differential equations.
- manipulate **Algebraically** to: investigate features of graphs; to work with and understand patterns within more complex sequences and series; and to develop a variety of approaches of mathematical proof.
- extend your understanding of **Vectors** to more fully encompass 3D space
- be introduced to and work with **Matrices** and **Complex Numbers**

How will I be assessed?

Course Assessment

The course assessment consists of **two** components **totalling 115 marks**:

- Component 1 – Question paper 1 (non-calculator) (35 marks)
- Component 2 – Question paper 2 (calculator) (80 marks).

Both question papers are set and externally marked by the Scottish Qualifications Authority (SQA).

The grade awarded is based on the total marks achieved across course assessment.

The course assessment is graded A-D.

For further information see [Advanced Higher Mathematics - Course overview and resources - SQA](#)

Study Materials

[SQA Past Papers Mathematics Advanced Higher](#)

[SQA Specimen Mathematics Advanced Higher Question Paper 1](#)

[SQA Specimen Mathematics Advanced Higher Question Paper 2](#)

[Free Advanced Higher Maths](#)

[SQA Question Bank - Dynamic Maths](#)