

Mathematics

Higher

Why take this course?

A pass in Higher Maths is necessary or desirable for many courses and careers. This is particularly true for Engineering, Technological subjects, Computer and Physical Sciences. It is also important in Medicine, Social Subjects, Accounting, Business, Management and the Merchant Navy. In the current climate of Renewable Energy in Orkney many possible careers associated with this will give our students the opportunity to stay in Orkney.

To succeed in this course, you need...

Your knowledge and understanding should be secure at National 5 Mathematics level. You will be expected to do a significant amount of practice and consolidation of taught topics out with lesson time and you will need resilience and perseverance to cope with the problem solving in the course.

Course Structure and Content

Expressions and Functions

The general aim of this Unit is to develop knowledge and skills that involve the manipulation of expressions, the use of vectors and the study of mathematical functions. The Outcomes cover aspects of algebra, geometry and trigonometry, and also skills in mathematical reasoning and modelling.

Relationships and Calculus

The general aim of this Unit is to develop knowledge and skills that involve solving equations and to introduce both differential calculus and integral calculus. The Outcomes cover aspects of algebra, trigonometry, calculus, and also skills in mathematical reasoning and modelling.

Applications

The general aim of this Unit is to develop knowledge and skills that involve geometric applications, applications of sequences and applications of calculus. The Outcomes cover aspects of algebra, geometry, calculus, and also skills in mathematical reasoning and modelling.

Course Assessment

You will be assessed throughout the year. Each assessment will be accumulative and will gauge how you are coping with exam level questions. If you pass these convincingly this would give an indication that you will be able to attempt the exam. The final award depends entirely on the result obtained in the SQA exam.

Essentials

You need a scientific calculator.

Where might this course take me?

As stated above Higher Mathematics is essential or desirable as part of the entry qualifications for further study in many areas such as Mathematics, Engineering, Science, Computing or Technology. In the current climate of Renewable Energy in Orkney many possible careers associated with this will give the opportunity to stay in Orkney. Higher Mathematics would give you a great advantage when applying for jobs or courses associated with any of these.