

Engineering Science Higher

Why take this course?

The course is suitable for students who want to develop a deeper understanding of the central role of engineers as designers and problem solvers. You should be able to respond to a broad and challenging exploration of engineering and will have opportunities to conceive, design, implement and control complex engineering systems.

The Course is practical, exploratory and experiential in nature. It enables learners to develop knowledge and understanding of key engineering concepts and processes, the ability to apply these to a variety of problems and an awareness of the impact of engineering on society and the environment.

These skills, knowledge and awareness are developed through a range of contexts within the broad discipline of engineering, including mechanical, pneumatic, structural and electronic systems.

To succeed in this course, you need...

The course would suit those who are working toward (or have already achieved) a National 5 in Engineering Science or Physics. It would be beneficial to have passed National 5 Mathematics (Not Applications of Mathematics) to progress in this course.

Course structure and Content

The main things you will learn:

- to develop an understanding of the role and impact of engineering in changing and influencing our environment and society
- How to apply knowledge and understanding of basic engineering facts and ideas
- to understand the relationships between engineering, mathematics and science
- how to apply skills in analysis, design, construction and evaluation to a range of straightforward engineering problems
- to communicate engineering concepts clearly and concisely using appropriate terminology

Course Structure

Engineering Contexts and Challenges

Electronics and Control

Mechanisms and Structures

Course Assessment

To achieve a course award in this subject you must pass the Course Assessment and final examination combined. All pupils will be expected to pass a range of specified outcomes from the units outlined above. You will sit a final exam worth 69% of the grade with 31% attributed to the Course Assessment.

Where might this course take me?

This Course or its units may provide progression to:

Other qualifications in Engineering Science or related areas

Careers in Materials Science, Naval Architecture, Control Systems, Railway Maintenance, Offshore Engineering, Mechanical Engineering, Prosthetics and Orthotics, Biomechanical Engineering, Electrical Engineering, Building Management, Environmental Engineering, Computing Science, Marine Engineering, Electrical Trades, Energy Engineering.

Further study, employment or training