Spalding Grammar School Sixth Form

Enrichment Information

AS Engineering
Level 3: Certificate

Entry Requirement:

*Grade 6 in GCSE Product Design, GCSE Resistant Materials or GCSE Engineering **and** grade 7 in GCSE Mathematics. Alternatively, GCSE Mathematics grade 7 together with Physics grade 6 **or** Dual Science grades 77.*

Students studying GCSE Textiles or GCSE Graphic Design should speak to the Head of Design Technology

Awarding body: OCR

About the subject: The world of engineering is a place where this country excels and our engineers are sought all over the world. At a time when the world is facing some of its most challenging times, qualified engineers face some of the best long-term employment prospects. Most university engineering courses recognise the value of this subject as a supporting A Level equivalent, when applying for an engineering degree, to be studied alongside maths and a science. Most students who opt for this enrichment already have career aspirations in this field and would be well qualified to go on to degree courses or apprenticeships.

The course covers the following:

- The scientific principles used by engineers to identify the most suitable materials in a given engineering context.
- Use of maths as an aid to model and solve problems across a range of practical engineering contexts.
- Principals of mechanical engineering systems and components.
- Knowledge and skills that are appropriate for a learner to fully understand the interface between mechanical and electronic engineering within a modern engineering context.
- Experimental work on structures, loads and design solutions.

Further studies could be continued dependent on numbers to go onto Extended certificate in Engineering making it a full A level award.

Assessment:

All the units in this qualification are mandatory and 3 of these will be completed in Y12, enabling certification. The units and details of how they are assessed are:

Engineering Technical Level 3 introduces learners to the world of Engineering via three external examinations, Mathematics for engineering, Science for engineering, and Principles of mechanical engineering.