

DT ALEVEL COURSE DESCRIPTIONS



**BEVERLEY
JOINT
SIXTH**



ENGINEERING

This course will develop your creativity and ability to apply skills and knowledge to solve design problems in a methodical and practical way. The units are designed to help you to create an analytical and enquiring approach. These skills are much in demand from employers as well as providing a firm foundation for independent study at higher education. The Edexcel GCE in Engineering gives students an understanding of different areas of engineering, helping them to build and apply knowledge within a wide variety of engineering contexts.

Students require at least a grade B in Mathematics at GCSE level to be successful in this course.

Year 12 AS Level

This is the first year of an exciting two year course, which builds upon skills learnt from the Engineering Diploma and GCSE Technology courses. The course can be completed as a one year course if, following review, the student does not wish to progress to A2 level. However, students wishing to progress to engineering degrees should also take GCE Maths and either GCE Physics or Chemistry

Unit 1 – Engineering Materials, Processes and Techniques

Students become familiar with a range of engineering materials and processes, and how these can be used to manufacture high quality finished products (externally assessed)

Unit 2 – The Role of the Engineer

Students investigate the role of a professional engineer responsible for the design or manufacture of an engineered product or service (internally assessed)

Unit 3 – Principles of Design, Planning and Prototyping

Students produce a design solution to a client brief and demonstrate its effectiveness through developing a prototype (internally assessed)

Year 13 A2 Level. This requires successful completion of Units 1, 2 and 3.

Unit 4 – Applied Engineering Systems

Students look at ways in which a systems approach can be used to provide engineering solutions (externally assessed)

Unit 2 – The Engineering Environment

Students learn how regulations and codes of practice affect the design and manufacture of engineering products or services (internally assessed)

Unit 3 – Applied Design, Planning and Prototyping

Students draw upon their newly-gained engineering expertise to design, develop and manufacture an engineering solution to a given client brief (internally assessed)

Career Opportunities: Chemical, Civil, Mechanical, Medical & Structural Engineering, Industrial Product Design.