

# **BTEC Engineering**

## **What do you study?**

**This qualification is for year 10 and 11 students completing their GCSE's in 2018 and 2019. The choice of replacement qualification for student entering year 10 in 2018 is currently under review.**

This qualification includes the following units:

### **Unit 1 – The Engineered World**

- Assessed in an online 1 hour exam.
- In this unit, you will discover the world of engineering. You will investigate the processes used to manufacture modern products within different engineering sectors.
- You will also study some of the new developments in materials and engineering technology that have an impact on life today – or will have in the very near future.
- You will also investigate waste reduction and sustainability issues from an engineering perspective, discovering how engineers can help control and reduce environmental damage.

### **Unit 2 - Investigating an Engineering Product**

- This unit will be assessed through 4 written assignments that will allow you to investigate a manufactured product to learn what considerations a designer would keep in mind when writing a technical specification.
- You will investigate the materials and commercial production processes used to manufacture the product, in order to learn why they were used in preference to others that might also have been appropriate. You will also learn how certain materials and processes can affect the environment.
- In studying quality issues, you will come to understand how the quality of a product is assured throughout its manufacture, and you will learn how specific forms of quality control contribute to overall quality assurance.

### **Unit 7 – Machining Techniques**

- This unit will be assessed through two written and one practical assignment.
- This unit will help you to understand the engineering processes that we use to generate and form shapes through machining techniques.
- You will learn how to select, investigate and use machining techniques (drilling, turning and milling).
- You will also use work-holding devices and a range of tools so that you can carry out a variety of machining processes.
- You will learn how to set the machines before you use them and how to monitor the machines while you are using them.
- You will also learn how to inspect the items you produce for compliance and accuracy.

Health and safety is vital. Therefore, you will also learn how to operate machinery safely.

### **How is the course assessed?**

- The exam lasts for 1 hour and contains 50 marks
- NEA Coursework – (75%)

### **Exam Board link**

**Edexcel**