

TECHNOLOGY FACULTY – ENGINEERING BTEC LEVEL 1 / 2
YEAR 10

<i>Topic(s) covered</i>	<i>Resources available e.g. Website</i>
<p>The course is made up of three components, two that are internally assessed and one that is externally assessed. Our three-block structure (explore, develop and apply) has been developed to allow students to build on and embed their knowledge. This allows them to grow in confidence and then put into practice what they have learned. Our assessment structure is also designed so that students can build on what they learn and develop their skills as they move through the course.</p> <p>Component 1 Exploring Engineering Sectors and Design Applications. During Component 1 students will –</p> <ul style="list-style-type: none"> - Explore the different sectors, products and interconnections within the industry. - Investigate what various engineering organisations and functions do, in addition to potential career paths. - Discover the engineering design and manufacture processes. <p>Component 2 Investigating an Engineering Product. During Component 2 students will –</p> <ul style="list-style-type: none"> - Learn why engineers choose certain materials and components to make products. - Investigate how products are made. - Identify best practise when it comes to safety and risk management. - Develop research, observation, recording, interpretation and measuring skills. - Put what they have learnt into practise by safely planning, reproducing and testing an engineered product. <p>Component 3 Responding to an Engineering Brief. To achieve this aim, students will –</p> <ul style="list-style-type: none"> - Build on what they have learned in Components 1 & 2. - Identify the problem, develop a hypothesis and investigate possible solutions. - Create a prototype that's meets the brief. - Record, analyse and evaluate data and outcomes and reflect on how the product meets the brief. 	<p>Tools and equipment required will be provided in school as per the topics opposite.</p> <p>Possible websites for background engineering information and demonstrations of industrial techniques. http://manufacturing.stanford.edu/ www.edexcel.org.uk</p>

TECHNOLOGY FACULTY – ENGINEERING BTEC LEVEL 1 / 2
YEAR 11

<i>Topic(s) covered</i>	<i>Resources available e.g. Website</i>
<p>Unit 14 – Selecting and Using Secondary Machining Techniques to Remove Material In this unit you will be using all of the knowledge and skills that you have gained in Year 10 to make a complex engineering product to very accurate tolerances. The accompanying portfolio will cover all of the information on machine tools, their setting and operation, speeds, risk assessment etc. It will also production plan the complete manufacturing process.</p> <p>Unit 18 – Engineering Marking Out In this unit you will be studying marking out equipment and inspection techniques. You will produce a portfolio on measuring and marking out equipment and technique. The practical work will be to mark out the parts that are to be manufactured in Unit 14.</p>	As Year 10.