

Curriculum Information Bramcote College

Year Group: 10

Subject: Technology – Engineering (OCR Cambridge Nationals in Engineering Design)

Objectives/purpose	<p>To learn how to think and express your ideas as a Design Engineer.</p> <p>To learn how to produce technical drawings for a given object</p> <p>To learn how to use CAD/CAM to produce a product to given data.</p> <p>To learn how to use materials to create a prototype</p> <p>To learn about PPE and Risk Assessments</p> <p>To learn how to plan manufacturing</p>
Autumn Term	<p>To make sweet dispenser – Being able to use engineering drawings to product products to the exact sizes and functionality.</p> <p>Learn the principles and basics of what Engineering is, and what their (the students) aspirations are. Development and visual communication of ideas, from sketching to colour shade and render, 2&3Dimension, technical drawing, 2D Design CAD and Iterative design in Sketchup.</p> <p>To make sweet dispenser – Being able to use engineering drawings to product products to the exact sizes and functionality. Production of a prototype using a variety of materials Using tools, machines and processes to produce a produce with precision.</p>
Spring Term	<p>Unit R107 – Speaker project. This is to design and model a speaker enclosure to the exam board's requirements. Pupils will need to design and draw using 2 and 3Dimensional drawing packages. They will need to render their computer designs to add texture.</p> <p>Completion of Unit, Prototype and Portfolio.</p>
Summer Term	<p>Exam preparation – Unit R105</p> <p>Pupils to finish R106 – Pump analysis project (this was started in Year 9)</p>
How is progress measured?	<p>Students take 4 units each worth 25% of the final grade. Three are assessed by coursework and one is assessed by exam.</p> <p>Work is assessed in accordance with the mark scheme for this course.</p> <p>Students preparing for an exam will complete various past exam questions that will be teacher and peer assessed.</p> <p>Photographic evidence of skills</p> <p>Checking and marking portfolio</p>
How is the subject externally examined? (KS4 and KS5)	<p>25% of the course has an external examinable unit, this is to be taken at the end of the course. The other 75% is coursework.</p>
Extending Learning at home	<p>Pupils will be issued with revision guides to assist them with their examinable unit. They will also be using knowledge organisers.</p>

Support Available	Support is available by emailing class teacher outside of lessons.
Useful web addresses and book resources/revision guides	www.technologystudent.com www.bbcbitesize.com www.ocr.org.uk/qualifications/cambridge-nationals/engineering-design-level-1-2-award-certificate-j831-j841/

Date reviewed: