



Bishop Stopford's School

Curriculum Map Year 11

Btec L1/ 2 Tech Award in Engineering

Curriculum Intent:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work	<p>Component 2- Learning aim C: Plan the manufacture of and safely reproduce/inspect/test a given engineered component</p>	<p>Component 3- Learning aim B- Provide a design solution for an engineered product against the needs of an engineering brief Learning aim C- Provide solutions to meet the needs of an engineering brief</p>	<p>Component 3- Revision of learning aims A-C Exam window 1</p>	<p>Component 3- Revision of learning aims A-C</p>	<p>Component 3- Exam window 2</p>	<p>Preparing for the next steps of an engineering career</p>
Core Skills	<ul style="list-style-type: none"> • Making using engineering processes. • Inspecting and testing a chosen solution. • Safe preparation, good housekeeping and close down of the work area. • Making skills associated with the product to be produced. • Skills in observing and recording techniques, e.g. in process measurement and comparison. 	<ul style="list-style-type: none"> • Design sketching, to include 2D, 3D, exploded diagrams, annotation, circuit diagrams. • Design for manufacture, e.g. fabricate, forge, cast, machined. 	<ul style="list-style-type: none"> • Literacy • Numeracy • Decision making 			
Core Knowledge	<ul style="list-style-type: none"> • Defining an engineering problem. • Developing possible solutions. • Choosing a solution. • Evaluating the outcome of the project. • Awareness of risks and hazards for making processes. 	<ul style="list-style-type: none"> • Analysing the existing product with reference to the brief. • Dimensions and tolerances, to include linear, radial, surface finish. • Physical form, to include 2D, 3D, flat, curved. • Attributes, to include low resistance, sharp corners, moisture traps. • Materials, e.g. aluminium, steels, polymers. • Processes, e.g. fabrication, drilling. • Identifying relevant issues with existing design. • Design ideas, e.g. variation in form, variation in approach, use of different methods, use of different componentry. • Reviewing the credibility of the design ideas given the needs of the brief. • Selecting the most appropriate design solution. • Justification of the design solution. • Justification of the processes to be used. • Types of engineering information, to include production data, engineering drawings, job cards. • Interpreting patterns and trends related to the engineering information. • Identifying issues and causes associated with the problem 				
Link to prior learning	<ul style="list-style-type: none"> • Component 1- B1 The design process • Component 2- A1 Materials, A3 Processes, B1 Practical engineering skills. 	<ul style="list-style-type: none"> • Component 1- LA A-B • Component 2- LA A-C 				
Assessment & Feedback	<p>Knowledge retrieval activities are used at the start of each lesson to gauge understanding of content, this is followed by whole group feedback. The use of command verbs to direct objectives and plenary activity responses, developing student understanding and guiding feedback that links to the specification.</p>					
	<p>Feedback on Mock assignment focusing on C2 LAC utilising specification grading criteria.</p> <p>Assignment 5- Assessment of C2 LA C.</p>	<p>Whole group feedback provided on mock examination results.</p>	<p>Whole group feedback provided on mock examination results.</p>	<p>Whole group feedback provided on mock examination results.</p>		