Curriculum Overview: A LEVEL PRODUCT DESIGN

Rationale:
(STUDENTS WILL BE FOLLOWING THIS PLAN OVER A 2 WEEK ROTATION AS STATED BELOW THE ROOMING WILL DETERMINE WHICH TYPE OF LESSON WILL BE TAKING PLACE AND AT WHAT TIME DURING EACH 2 WEEK ROTATION)

Students will acquire an understanding of the properties and characteristics of a range of materials including Timbers, Metals and Polymers, through the use of a range of Hand and Machine Based Manufacturing Processes and Techniques (e.g. Material Removal, Material Forming, Joining, Heat Treatment and Finishing). Further knowledge of CAD software and Orthographic Drawing techniques will be incorporated throughout the course. Students are encouraged to be creative incorporating a wide range of different materials, finishes and processes in the design and manufacture of their products.

Also a good theoretical knowledge of the properties, processes, production and finishes of a range of different materials. Students will explore the wider world of product design learning about the influences, stimuli and constraints of design and manufacture. Consideration of commercial and industrial processes to manufacture products in scale and are encouraged to look at products in a different light, pushing boundaries and considering designing for All.

Term / Length of Unit	Outline	Assessment	Home Learning	Resources	Reading	Knowledge/Skills End Points
Half Term 1 **7 weeks**	**Continuation of NEA** Theory lessons AO2 Section D – Development of Design prototypes. Students commence with the development and manufacture of their final prototype. Modifying and improving aspects throughout the iterative design process.	Assessment of the ongoing sections of the NEA.	NEA development Revision A selection of home learning and research tasks linking to the theory. Past paper questions	Full SOL with lesson resources generated through power points. PowerPoints and work sheets on Staff Resources. Revision book POWERPOINTS Worksheets Theory book Knowledge Organiser A variety of materials, tools and equipment.	• Key vocabulary used • Core definitions of key words • Use of knowledge organisers Knowledge Organiser Revision booklet Sequence of practical tasks Research and write tasks. Power point information Key words	***Knowledge*** • Patents • Manufacturing, repair and disposal • Feasibility studies • Digital Design and Manufacture – CAD/CAM, ANSYS etc..
Half Term 2 **7 weeks**	(continued from above)	HL tasks, Exam style questions K/U Practical skills	(continued from above)	(continued from above)	(continued from above)	***Knowledge;*** • Sustainability • Paper and Boards • Enhancement of materials • Enterprise and Marketing
Half Term 3 **6 weeks**	(continued from above)	HL tasks, Exam style questions K/U Practical skills	(continued from above)	(continued from above)	(continued from above)	***Knowledge;*** • Ergonomics and Anthropometrics • Market pull, technology push • New Technologies • Product Life cycle
Half Term 4 **6 weeks**	**Continuation of NEA** Theory lessons AO3 Section E – Analysis and Evaluation.	HL tasks, Exam style questions K/U NEA Research	Identification of a typical Research of NEA to examination spec and criteria.		Knowledge Orgainser Revision booklet Sequence of practical tasks Research and write tasks. Power point information Key words	***Theory;*** • Textiles based materials • Electronic Systems
Half Term 5 **5 weeks**	**Revision and Preparation for External Exams** Theory lessons Revision of Topics covered throughout the course.	HL tasks, Exam style questions K/U Practical skills		POWERPOINTS Worksheets Theory book Knowledge Organiser A variety of materials, tools and equipment.	Knowledge Organiser Revision booklet Sequence of practical tasks Research and write tasks. Power point information Key words	***Theory;*** Review of all aspects covered over the two years – Revision program developed in line with the focus requitred for the group – key areas to be identified as students' progress through the course.

Half Term 6 **7 weeks**						