

A Level Design Technology Department 2023-2024

	YEAR 12	YEAR 13
Term 1	<p>Component 2-NEA Coursework-9DT0/02: Independent Design and Make Project Introduction to NEA-Students to find their own real client and design problem Part 1: Identifying and outlining possibilities for design-Introduction</p> <p>Component 1 – Theory-9DT0/02 3 Use of media to convey design decisions, to record to recognised standards, explain and communicate information and ideas using the following methods and techniques: a) pictorial drawing methods for representing 3D forms – isometric, 2-point perspective b) working drawings for communicating 2D technical information – 3rd angle orthographic projection, triangulation c) nets (developments) for communicating information about 3D forms in a 2D format d) translation between working drawings, pictorial drawings and nets (developments) e) report writing. Design theory through the influences and methods of the following key historical movements and figures: a) Arts and Crafts – William Morris b) Art Nouveau – Charles Rennie Mackintosh c) Bauhaus Modernist – Marianne Brandt d) Art Deco – Eileen Gray e) Post Modernism – Philippe Starck f) Streamlining – Raymond Lowey g) Memphis – Ettore Sottsass</p>	<p>Component 2-NEA Coursework-9DT0/02: Independent Design and Make Project GRID 6. Final design solution: Students start to evidence a final design proposal which includes technical details of all materials and/or component parts, processes and techniques. Component 1 – Theory-9DT0/02 Students learn about the application of specialist measuring tools and equipment. They build on previous knowledge in understanding the uses, characteristics, advantages and disadvantages of permanent and semi-permanent joining techniques, and different forms of finishing</p>

<p>Term 2</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project GRID 1. Identification and investigation of a design possibility. Students begin to investigate the needs, wants and values of their client/end user.</p> <p>GRID 2. Investigation of needs and research Students start to assess the needs, wants and values of their client/end user and the needs of the prototype.</p> <p>Component 1 – Theory-9DT0/02 Students begin to understand the importance and influence of user centred design. They look at the principals, applications and the influence on design of anthropometrics and ergonomics: They look at Form Follows Function & Form Over Function: Students begin an in-depth study of a range of materials. This term they begin to understand the processes, applications, performance characteristics of timber</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project Part 3: Making a final prototype: GRID 9. Tools and equipment and GRID 10. Quality and accuracy: Students begin production of a high-quality prototype that is appropriate to an advanced level of demand, meeting the requirements of the design specification</p> <p>Component 1 – Theory-9DT0/02 Students develop prior KS3/KS4 knowledge in Health & Safety to fully understand the principles and applications of health and safety laws, and regulations, and their impact on the designing and making process, including the consequences of non-adherence. Students also understand the application, advantages and disadvantages of various quality monitoring systems such as QA / QC and TQM. Students are also introduced into modern manufacturing systems such as ASRS, AGV, JIT and QRM</p>
<p>Term 3</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project GRID 2. Investigation of needs and research Continued GRID 3. Specification: Students begin production of a refined design brief based on outcomes of research and investigations</p> <p>Component 1 – Theory-9DT0/02 Students begin an in-depth study of a range of materials. This term they begin to understand the processes, applications, performance characteristics of polymers and Smart & Modern Materials</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project Part 4: Evaluating own design and prototype: GRID 11. Testing and evaluating Students begin the analysis and evaluation of their final prototype.</p> <p>Component 1 – Theory-9DT0/02 Students investigate cleaner and sustainable manufacturing. They look at wider issues of sustainability, biodegradability and environmental implications of technology and their NEA. Students look at the importance of protecting intellectual property rights of designer/makers. Students review various management systems such as SCRUM & Six Sigma</p>
<p>Term 4</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project Part 2: Designing a prototype Introduction GRID 4. Design ideas; Students begin the production of a range of design proposals that are realistic, workable, and which address the criteria in the specification and the needs and wants of their client.</p> <p>Component 1 – Theory-9DT0/02 Students begin an in-depth study of a range of materials. This term they begin to understand the processes, applications, performance characteristics of</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project Photographic evidence and portfolio submission-Focus on Revision</p> <p>Component 1 – Theory-9DT0/02 Student will undertake a broad range of revision strategies to prepare them for an early June examination</p>



	Composites, Paper & Boards and Textiles. In addition, students also investigate CAD / CAM to assist with their NEA	
Term 5	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project</p> <p>GRID 5. Development of design ideas: Students should be well into demonstrating an iterative approach to design development.</p> <p>Component 1 – Theory-9DT0/02</p> <p>Students begin an in-depth study of a range of materials. This term they begin to understand the processes, applications, performance characteristics of Metals.</p>	<p>Component2-NEA Coursework-9DT0/02: Independent Design and Make Project</p> <p>Examination Revision</p>