

Year 12	Subject Theme	Wider Reading/Independence
Autumn	<p>Exploring 2D and 3D drawing skills, develop knowledge of industry use of graphical communication</p> <p>Introduction to Design Engineering.</p> <p>Design context and links to existing product</p> <p>Challenge task used to develop communication</p> <p>Materials and material properties/qualities. Understand how factors influence material choice in Design Engineering</p> <p>CAM Project</p> <p>Machatronics and Smart Materials</p> <p>Health & Safety – Manipulating materials and production methods</p>	<p>Students to use sketch pad and note folder for keeping record of knowledge and development.</p> <p>They will have theory lessons within the main themes to build up on examination knowledge</p>
Spring	<p>Machatronics and Smart Materials-continued</p> <p>Mechatronic Test rig</p> <p>Health & Safety – Manipulating materials and production methods - continued</p> <p>Materials Science and structural integrity</p>	<p>Students need to keep a 2 working note books documenting the separate elements of the course as these will be taught alongside each other</p>
Summer	<p>Product Analysis and skills leading to the iterative design process Up- cycling Project</p> <p>Iterative Design Project – Strand 1- Explore</p>	<p>Students need to keep a 2 working note books documenting the separate elements of the course as these will be taught alongside each other</p> <p>Students will also need to create an A3 Power point in which to keep and update their Iterative Design Project</p>
Key dates	<p>PPE – Year 12 April 23</p> <p>PPE – Year 12 June/July 23</p>	

Subject Name: Design Engineering



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Autumn	Iterative Design Project Strand 1 – Explore- continue Strand 2- Create - Design Thinking Strand 3 – Create – Design Communication	Course text Book OCR AS/A Level Design and Technology – Grundy.Mc Carthy.Piroddi.Walker.Arnold.White – Hodder Education ISBN 978-1-5104-0265-2
Spring	Iterative Design Project Strand 4 – Create – Design Prototypes Strand 5 – Evaluation Exam theory/Past papers	Course text Book OCR AS/A Level Design and Technology – Grundy.Mc Carthy.Piroddi.Walker.Arnold.White – Hodder Education ISBN 978-1-5104-0265-2
Summer	<i>Exam Theory/Past papers</i>	Course text Book OCR AS/A Level Design and Technology – Grundy.Mc Carthy.Piroddi.Walker.Arnold.White – Hodder Education ISBN 978-1-5104-0265-2
Key dates	PPEs yr13 – 14 th Nov 22 – 25 th Nov 22 PPEs Yr13 – 6 th March – 20 th March 23 Provisional dates 2023 21st Feb deadline for entries for Summer 2023 15 May deadline for receipt of centre assessed marks Design and Technology	

	Engineering (A Level) H404/1 Principles of design engineering 1 h 30 min 7th June 23
	H404/2 Problem solving in design engineering 1 h 45min 16 th June 23