

	<u>PRODUCT DESIGN</u>	
	Qualification Level	A-level
	Exam Board/ Syllabus	AQA
Contact(s)	Mr P. Lopes	

Why Study This Course?

This creative and thought-provoking qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers. Especially those in the creative industries. They will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put their learning into practice by producing prototypes of their choice. Students will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

Course Content

A-Level Design and Technology: Product Design requires students to engage in both practical and theoretical study. This specification requires students to cover design and technology skills and knowledge as set out below. These have been separated into:

- technical principles
- designing and making principles.

The specification content is presented in a two column format. The left hand column contains the specification content all students must cover, and forms the basis for the assessments. This column gives additional information to ensure students study the topic in appropriate depth and gives teachers the parameters in which the subject will be assessed.

Students should develop the ability to draw on and apply a range of skills and knowledge from other subject areas to inform their decisions in design and the application or development of technology. There are clear links between aspects of the specification content and other subject areas such as computer science (section 'The use of computer systems' and section 'Digital design and manufacture'); business studies (section 'Enterprise and marketing in the development of products; art and design (section 'Design communication') and history (section 'Design Theory'). This is not an exhaustive list, and there are other opportunities within the specification for students to integrate and apply their wider learning and understanding from other subject areas studied during Key Stage 4, as well as those subjects that they are studying alongside A-Level design and technology.

Students must also demonstrate maths and science skills. The right hand column throughout subject content illustrates potential links where maths and science skills and knowledge can be applied in the context of design and technology. These are examples of where these skills can be applied and are not intended to be exhaustive.

Course Assessment Pattern/ Structure

At A-Level students should develop an understanding of a broad range of materials, with emphasis on the life cycle of products, manufacture and final disposal. This specification also considers the broader issues for the designer including the environmental sustainability of products and consumer safety.

The course will also help students to develop a broad view of design and technology, develop their capacity to design and make products and appreciate the complex relations between design, materials, manufacture and marketing.

Business & Innovation	<i>English</i>	<i>Expressive Arts & Languages</i>	<i>Humanities</i>	<i>Mathematics</i>	<i>PE</i>	<i>Science</i>
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Exam Structure

A-Level students will study two components of work:		
<p>Component 1: Technical principles & Design and making principles</p> <p>50% of qualification</p>	<p>Assessment achieved by: 2 Written examination of 2.5 hours based on Technical principles (30%) & 1.5 hours based on Designing and making principles (20%)</p>	<p>Content overview:</p> <p>Topic 1: Materials Topic 2: Performance characteristics of materials Topic 3: Processes and techniques Topic 4: Digital technologies Topic 5: Factors influencing the development of products Topic 6: Effects of technological developments Topic 7: Potential hazards and risk assessment Topic 8: Features of manufacturing industries Topic 9: Designing for maintenance and the cleaner environment Topic 10: Current legislation Topic 11: Information handling, Modelling and forward planning Topic 12: Further processes and techniques.</p>
<p>Component 2: Non-exam assessment NEA (Independent Design and Make Project)</p> <p>50% of qualification</p>	<p>Assessment achieved by: Single, substantial designing and making activity which incorporates a Portfolio of approximately 40 sides of A3 paperwork along with any models and prototypes.</p>	<p>There are four parts to the assessment:</p> <p>Part 1: Identifying and outlining possibilities for design Identification and investigation of a design possibility, investigation of client/end user needs, wants and values, research and production of a specification Part 2: Designing a prototype Design ideas, development of design idea, final design solution, review of development and final design and communication of design ideas Part 3: Making a final prototype Design, manufacture and realisation of a final prototype, including tools and equipment and quality and accuracy Part 4: Evaluating own design and prototype Testing and evaluation</p>

Higher/Further Education & Career Links

Product Design could lead to a large range of careers or university courses in design or engineering fields such as; industrial design, automotive design, automotive engineering, civil engineering, aerospace design, architecture 3d design, product design, computer generated cartoons or games design, teaching, manufacturing, advertising, engineering, fashion, the CAD industry.

Apart from those who need product design for their chosen career, as a supporting A-Level, product design offers a great deal to the student who hopes to go to university or college. Universities look favourably at an A-Level which involves a great deal of self-discipline and practical application, and at the same time an academic content that embraces both the technical and artistic. Ideally product design is chosen alongside physics and maths to aid entry to an engineering degree.

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