PRODUCT DESIGN: 3D DESIGN

Qualification: A-Level

Overview of subject:

A level product design develops students understanding of materials and manufacturing processes, alongside creatively solving problems for clients in real life situations and contexts. Students will develop their analytical and evaluative skills as well as their designing and making skills, to create a product of their choice as a final project.

Two exams worth 50% of the A Level, 1 Non-exam assessment project worth 50% of the A Level (substantial design and make task of student's choice).

Topics studied in the syllabus include:

- Future technologies – a skills building project for design and communication skills focusing on new and emerging technologies
- Technical principles – focusing on developing knowledge of materials and manufacturing processes alongside other topics including digital design, ergonomics, health and safety, enterprise and marketing ...
- Skills portfolio – practical upskilling and practice of how to use different tools equipment and processes at college which can be used for the Non-exam assessment.
- Design competition – as a practice for the Non-exam assessment, in previous years for the Royal Society of Arts Pupil Design Awards.
- CAD / CAM workshops – using software such Autodesk Fusion and Inventor to practice designing and modelling prototypes which can be 3D printed.
- Designing and making principles – including, influential designers and design movements, technological and cultural changes, responsible design and environmental issues...
- Non-exam assessment – an individual project chosen by students to design and make a product to solve a problem for a real life client of their choice.

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The course might be of interest to:

Students who are interested in practical based subjects and enjoy problem solving. The course can complement both STEM and creative pathways, often having students who study maths and science or other creative subjects such as art and design or graphics.

The course is taught from the standpoint of welcoming those who have not studied previously at GCSE, though prior study of GCSE design and technology can be beneficial for those who have.

Potential future pathways:

If you wish to study Architecture at university then Product Design may be the right course for you. Other university courses that Product Design would help prepare you for are subjects such as Engineering, Car designer, Product Design, Furniture designer, Interior and spatial designer, Exhibition design, Automotive engineer, Aerospace engineer, Civil engineering.

There are both University degree pathways and apprenticeships with potential for sponsorship in certain industries. For example, CAD / CAM being one area taught which has many apprenticeship opportunities available.