

# DESIGN AND TECHNOLOGY PRODUCT DESIGN

## A LEVEL COURSE DESCRIPTION

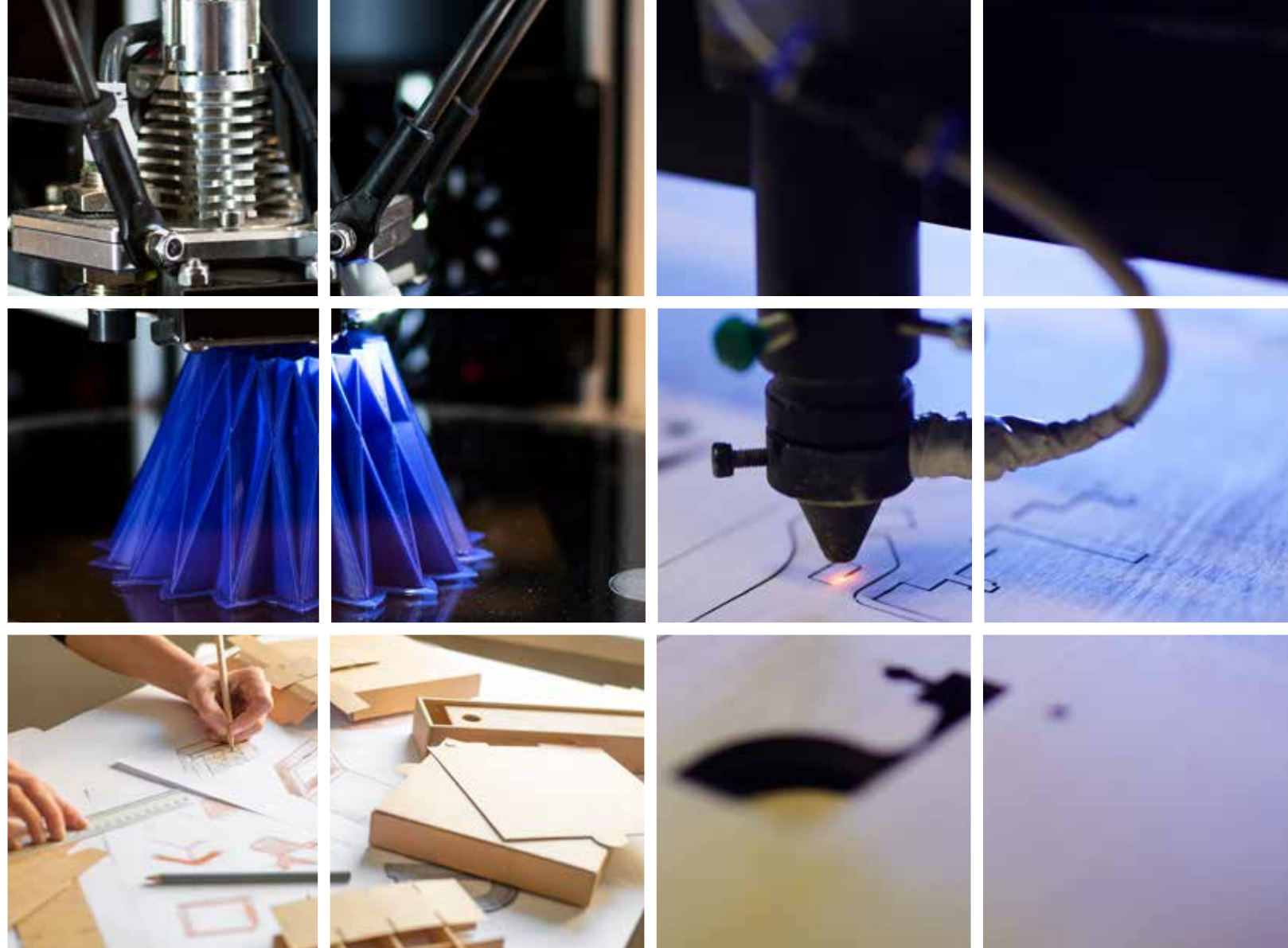
It's a Product Design World.

Think about the objects that you love. Your connection to the online world, mobile phones were designed using a computer. The car you yearn for started life as a reduced size clay model. A building that you admire sprang from the drawing board of an architect. It's not a new phenomenon. Our fascination with Product Design goes back to flint arrowheads and earthenware pots. As a Product Designer you are at the crossroads of a number of skills. Of course you need creativity, in order to imagine the shape and function of the object. You will also need to know about manufacturing processes, materials and marketing.

## BRINGING IDEAS TO LIFE

Product Design is an enormously satisfying career. You have an idea and with the use of materials like timbers, metals, polymers, smart materials, electronics, clay, CAD / CAM - it comes to life. Imagine how satisfying it must be for the person who designed the iPhone or Samsung Galaxy to hold the finished product in their hand.

Design engineers study, research and develop ideas for new products and the systems used to make them. They also modify existing products or processes to increase efficiency or improve performance.



## Progression

### Where will success take me?

Product Design could take you into a number of exciting career paths. Of course there's product engineering or automotive design. Maybe CAD for industry appeals to you more? This course could take you into Architecture, Teaching, Manufacturing, Advertising or Engineering. UK based companies like Dyson, BAe Systems, Dualit, Airbus, ARUP, JCB and TfL all offer opportunities for future careers with links to Product Design.





## ENTRY REQUIREMENTS

Students will need to have a passion for Product Design and be creative and imaginative in their approach, as well as having studied one of the following GCSE Technology: Product Design, Resistant Materials, Graphic Products, Systems & Controls or Engineering and gained a minimum of grade 6 & Mathematics grade 6 for entry onto the course.

## WHAT SKILLS WILL I LEARN?

The D&T Product Design will help you develop a number of skills:

- How to gather and analyse data
- How to investigate and problem solve
- How to express your views through literacy and conceptual design ideas
- How to work as a team to achieve results
- How to take responsibility for your own learning

## WILL IT FIT IN MY LIFE?

Product Design goes well with other subjects. If you want a career in design you might also consider Art & Design, Chemistry, Physics, Mathematics, Computer Science & Business Studies as companion A Levels.

## YEAR 12 OUTLINE

In Year 12 students develop an understanding of a broad range of materials, with emphasis on the product sustainability, ethical manufacturing and responsible recycling at the end of the product's life.

Along with the theory of product design students will look at developing critical thinking and practical skills to resolve design situations. Students go through the process of the design & manufacture of products including model making skills, computer aided design and manufacture (CAD/CAM) which enables them to actively engage and take responsibility for their personal development in the process of design to develop as effective and independent learners.

## YEAR 13 OUTLINE

In Year 13 students have the opportunity to further develop their knowledge and practical skills. You will continue to develop a substantial NEA project alongside an understanding of the processes and procedures of commercial / industrial production and manufacture:

**Paper 1: Technical principles:** Mixture of short answer and extended response. Two and a half hours written exam worth 30% of A Level.

**Paper 2: Designing and making principles:** Mixture of short answer and extended response questions. One and a half hours exam worth 20% of A Level.

**Non-Exam Assessment:** Practical application of technical principles, designing and making principles. Worth 50% of A Level.

## ENRICHMENT AND STUDENT SUPPORT

- Year 12 trip(s) to the Science Museum, New Designers Exhibition and the Design Museum.
- Weekly study support sessions.
- Up to date teaching and learning material with textbooks provided to all students.
- A well resourced workshop and full access to advanced CAD/CAM machinery (laser cutters, 3D Printers).

## Routes for Success - Technology, Languages and Communication

The Routes to Success Programme is designed for ALL students in Year 12 at St Angela's Ursuline 6th Form. The TECHNOLOGY, LANGUAGES AND COMMUNICATION programme aims to offer students opportunities to work with both industry and universities, opportunities will

include links with; The National Film Theatre, BFI Library, McKinsey, Arcadia, City University, Greenwich, London Met, Warwick and SOAS. Summer school opportunities will include links with; SOAS Languages, Sutton Trust US Summer Schools and Leicester University.

Please note- All Year 12 students will select one main 'Route for Success' from these in order to experience a specialist enrichment and learning support programme. It will, of course, be possible to select a subject/subjects from another route on your timetable. We base our Routes to Success Programme on the university curriculum structure and university links are not exclusive to one route, so can be accessed by all students.

