



DESIGN AND TECHNOLOGY: PRODUCT DESIGN

Advanced General Certificate of Education (AS and A2)

WHY DESIGN AND TECHNOLOGY?

'Design and Technology is about making things that people want and that work well. Creating things is hugely exciting: it is an inventive, fun activity.' **James Dyson**

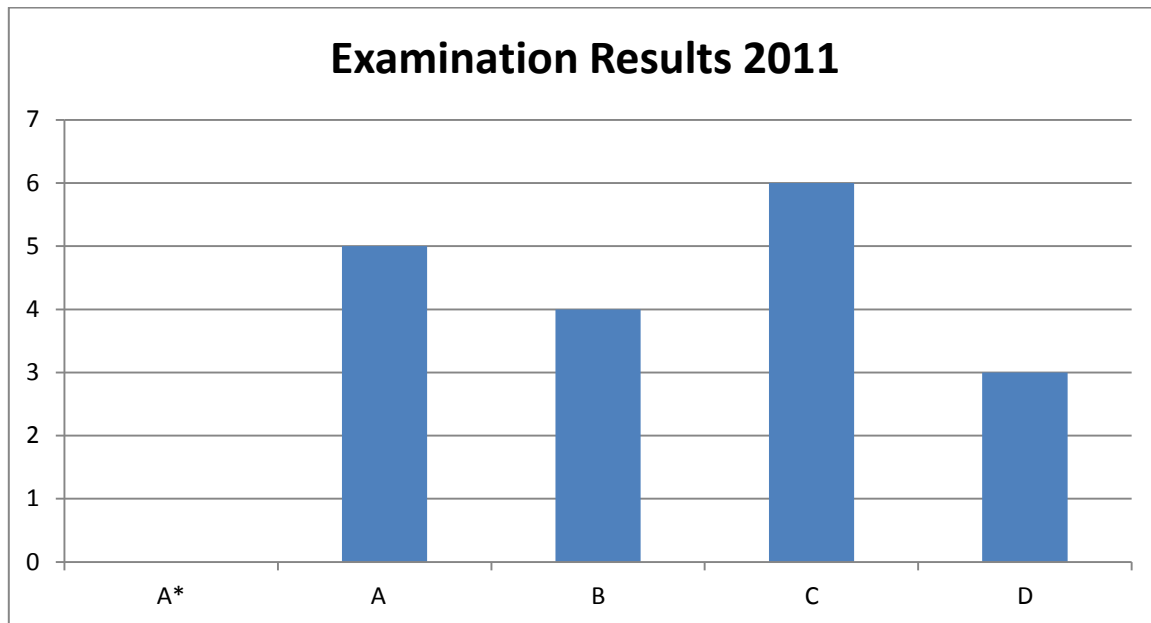
This subject will provide you with opportunities to develop your practical skills, knowledge and understanding of the way products are designed, made and manufactured. The subject requires initiative, creativity, determination but, most importantly, the desire to develop even better solutions to meet the needs of customers. The skills with which Design and Technology will equip you are highly sought after in the world of work and university. The Russell group of universities identified Design and Technology as 'Highly desirable' for Engineering course entry.

The Course will prepare you for opportunities in:

All Engineering courses	Architecture
Management	Manufacturing
Urban and Regional Planning	Ergonomics
Product Design	Education
ICT Courses (CAD or CAD/CAM)	

SPECIFIC ENTRY REQUIREMENTS

- 6 GCSEs (Grades A* - C)
- Grade B or above in GCSE Design and Technology: Product Design, Systems & Control, Electronic Product Design, Resistant Materials or Graphic Product design
- English and Mathematics C Grade minimum.



COURSE DETAIL

AQA Syllabus

SINGLE AWARD You will study four Units as follows:

Materials, Components and Applications (*Examination unit value 25% Externally assessed*)

This written paper will cover the physical and mechanical properties of materials and components. It will look at the methods of manufacture, CAD/CAM and the design issues that a designer has to resolve when developing a product.

Processes and Manufacture (*Internally assessed value 25% Portfolio unit*)

During this unit students will study two areas of Product Design. One project looks at the design of mass produced products with a focus on style. The second assignment will use CAD/CAM to develop products. A single folio and associated products will be assessed. These assignments will require students to design and make products and to develop their knowledge of materials and processes to a greater depth. Independent Learning (IL) work supports both tasks, this too will be assessed. The exam will be taken in June and again in January of the second year of the course if necessary.

In this unit, students will develop their practical skills, understanding and use of design and communications techniques. They will study style, form and shape through independent learning and design tasks. The aim is to stimulate creativity in designing. All folio work from the course will be collected and assessed.



Design and Manufacture (*Major Project Internally assessed value 25%*)

Portfolio unit

This involves the development of a single significant piece of work. Students will be required to develop both a folio and product of the highest quality. Working with a client or client group will assist greatly in securing the views of users and enhancing the products design. In this unit, students will demonstrate their practical skills, understanding and use of design and communications techniques. The product is expected to be made using a range of skills and techniques, including elements of CAD and, if appropriate, CAM

Synoptic Paper Examination unit value 25% (*Externally assessed*)

The synoptic paper brings together all elements of the course in a final exam. The paper will call upon the above units of study in a 3 hour exam where knowledge, understanding, designing and making skills are examined.