



## **AS/A2 3D Product Design and Technology (Level 3)**

### **WHY TAKE THIS COURSE?**

If you are intrigued about how products are designed and manufactured and have previously studied GCSE/BTEC Graphic Products, Resistant Materials, Product Design, Engineering, Art, Construction or a course of a similar nature then the AS/A2 3D Product Design course is for you. To be successful on this course you must enjoy designing and making products and be a creative individual. This is a qualification appropriate for students who might want to progress into areas such as 3D Design, Industrial Design, Product Design, Manufacturing, Business, Engineering, Interior Design, Sports Design, Ergonomics, Automotive Design and Architecture courses in Higher Education.

### **WHAT WILL I STUDY?**

You will learn about a broad range of materials such as composites, smart materials, metals, polymers and timbers and also look at how these material properties suit specific manufacturing processes and the function of a product, together with the aesthetic qualities. You will also research the wider issues that product designers must consider in today's climate, such as green and sustainable design, alternative biodegradable materials, methods of production, and inclusive design solutions. Within the A2 course students research a number of case studies that analyse individual products and how they relate to modern manufacturing systems, ICT in manufacturing, the application of ICT in Product Design, the work of past and present designers, major developments in technology, sustainable and environmental concerns, and human needs and factors.

### **HOW WILL I BE ASSESSED?**

AS Unit 1 and A2 Unit 3 are both externally assessed by examination papers. Unit 2 will consist of two coursework projects in one combined portfolio of work. Unit 4 is a self set piece of coursework, which lasts the whole of the second year course. This is assessed by your tutor and moderated by the examining board. Both Unit 1 and Unit 2 in the AS course are worth 50% each. You will carry 25% from each unit through to the A2 course when Unit 3 and Unit 4 are equally worth 50% of the A2 course (25% overall).

### **WHAT SKILLS AND SPECIAL QUALIFICATIONS DO I NEED?**

You will develop skills in design and manufacturing through coursework projects and acquire the knowledge of workshop tools and equipment. Presentation skills in the form of a portfolio of work and skills in magic marker rendering and CAD will be developed during the ideas and development stages of projects. You will also produce prototypes, developing skills in material selection and manipulation to test ergonomic and user interaction for your developing designs. You will also take part in problem solving activities, practical/design workshops and use a variety of media such as the internet, CD ROMs and CAD/CAM. You will need to be interested in Design and have at least a grade C GCSE in Design and Technology, Product Design, Graphic Design, Resistant Materials, Construction, Art or a related subject equivalent.

### **WHAT CAN I DO NEXT?**

Following AS and A2 Product Design 3D Design and Technology, you have a variety of options open to you. The majority of students progress onto higher education and begin a degree in the following areas: Industrial Design, Product Design, Mechanical Engineering, Electrical Engineering, Ergonomics, Marketing, Manufacturing/Production, Architecture, Computer Aided Design and Computer Aided Manufacture, together with a full range of craft based subjects. Alternatively you may decide to enter the world of work and combine further studies with an apprenticeship. Some of our past students have embarked on a 3 year Mechanical Engineering, Civil Engineering or Architectural apprenticeship. Following on from University and apprenticeships, students have been rewarded with successful career opportunities and advanced in the following careers: Teaching, Product Design and Automotive Design at companies such as Jaguar, Kellogg's Engineering, Formula One McLaren, Shell, BNFL and TVR.

### **PRIESTLEY EXTRA**

Being a successful designer involves much more than people realise, solving issues such as the environmental impact, sustainability, recycling, reusing and improving existing designs, together with considering the market demand, clients and potential users. Special skills are required to balance all the above.