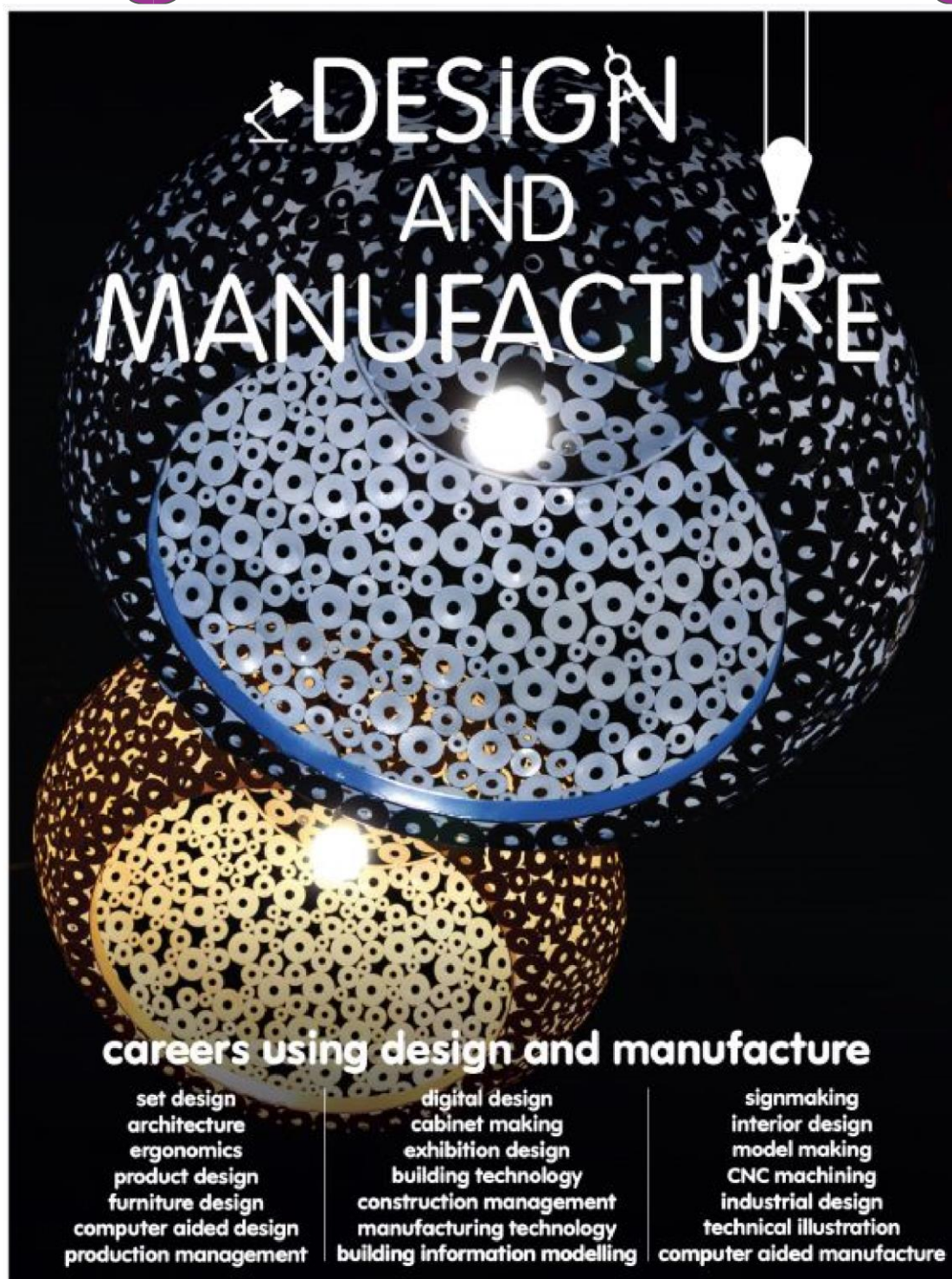


# Careers in Design & Technology



**DESIGN  
AND  
MANUFACTURE**

**careers using design and manufacture**

set design architecture ergonomics product design furniture design computer aided design production management	digital design cabinet making exhibition design building technology construction management manufacturing technology building information modelling	signmaking interior design model making CNC machining industrial design technical illustration computer aided manufacture
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gateway



# PRACTICAL CRAFT SKILLS

## careers using practical craft skills

joinery  
craft work  
sawmill work  
wood machining  
cabinet making  
electrical engineering  
electronics engineering  
construction crafts  
furniture manufacture

plumbing  
toolmaking  
pipefitting  
engineering  
IT hardware support  
motor vehicle repair  
sheet metal work  
vehicle body repair  
welding and fabrication

machining  
formwork  
blacksmithing  
shop fitting  
railway maintenance  
energy distribution  
telecommunications  
electronics assembly  
security systems installation



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# 5 WORK SKILLS ART & DESIGN

WILL GIVE YOU



## DRAWING



**In school:** It will come as no surprise to hear that drawing is a fundamental skill in art and design! In class, you will hone your natural flair, learning how to draw in new styles and mastering some of the techniques used to achieve particular effects.

## RESEARCH



**In school:** Research is about finding information and identifying the key bits. Art and design involves researching some of the important movements in art history and exploring how different materials can achieve different effects.

## CONFIDENCE



**In school:** In class, you will learn to express yourself through art before showing your creations to others and taking on board feedback. This will help you improve your skills and build confidence in your own abilities.

## INDEPENDENCE



**In school:** As well as carrying out independence creative work, art students must analyse and evaluate artworks – from paintings and sculptures to photos, films and installations – to reach personal judgements.



## RESOURCEFULNESS



**In school:** Art is all about resourcefulness – using the resources you have in front of you to create something amazing and new. This will mean thinking on your feet, coming up with novel ideas using your imagination and overcoming problems.



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to learn more.



## **Careers in Design and Technology**

Design and technology builds on the skills and knowledge you have already learnt. It leverages increasingly sophisticated resources, including dedicated teaching environments, manufacturing equipment and specialist teaching.

As you progress through this phase, you may be given the opportunity to focus on specific aspects of the subject such as product design, food technology, engineering, systems and control, electronics, textiles and graphics. However, at its core, is creativity and imagination. You learn to design and make products that solve genuine, relevant problems within different contexts whilst considering your own and others' needs, wants and values.

To do this effectively, you will acquire a broad range of subject knowledge and draw on additional disciplines such as mathematics, science, engineering, computing and art.

- Jobs directly related to Design and Technology include:
- CAD technician
- Clothing/textile technologist
- Colour technologist
- Exhibition designer
- Furniture designer
- Interior and spatial designer
- Product designer

### **Jobs where Design and Technology would be really useful include:**

- Advertising art director
- Automotive engineer
- Furniture conservator/restorer
- Graphic designer
- Materials engineer
- Procurement manager
- Product manager
- Production designer, theatre/television/film
- Stylist

### **Typical employers**

You can find employment in both the private and public sector. Private sector work could include manufactured products for the domestic and industrial market. Working in the public sector may involve designing interactive facilities, such as public information points and equipment used by services such as the police, fire and ambulance.

### **Employers include:**

- industrial and domestic product manufacturers

- car manufacturers ● point-of-sale designers ● retailers.
- Self-employment, or employment within a design-based consultancy, is also possible.

### **Skills for your CV**

A degree in product design or industrial design develops your creative design skills and gives you the technical ability you need to use production methods and materials creatively. It also equips you with other skills that are valued by many employers, such as:

- presentation skills
- communication skills
- the ability to work to deadlines
- commercial and entrepreneurial skills
- problem-solving skills
- the ability to use your initiative and work independently
- teamworking skills
- visual and spatial awareness
- general and specialist IT skills, such as computer-aided design (CAD).

### **Studying design and technology at university – topics you may cover**

- typography
- principles of visual communication
- design for online and print
- illustration
- photography
- basic moving image (including animation)
- graphic design theory (the study of the cultural, historical and contemporary contexts of graphic design).
- design media (producing 2D and 3D drawings manually or with relevant software)
- materials (and their applications, properties and limitations) ● design communication theory ● the manufacturing process.
- reflection, planning and presentation
- design process to product
- making contact with the industry
- design communication
- objects and experiences
- materials and processes
- critical analysis
- product CAD

### **Apprenticeships in Design Technology**

See the results of your work with a manufacturing, processing and logistics apprenticeship, as you turn raw materials into products

Manufacturing is the process of adding value to raw materials by turning them into products. Almost every object we use has been manufactured in some way, either in a large factory or a small workshop, helping supply other industries with the materials needed to do their job.

Manufacturing, processing and logistics are responsible for almost all goods in some way, be it the bricks and concrete used in construction, the food stocked in supermarkets, or the drugs used to treat patients.

Manufacturing and processing apprenticeships create parts or products from raw materials and other inputs, with a focus on textiles, food, furniture, glass, metals and printing, among others, and offer the opportunity to train in different roles, from operating huge machines in a factory to working with hand tools in a small workshop. While logistics transports and stores goods as they move through the supply chain, with a range of functions, such as inventory management, warehousing, distribution, transport, and customer service.

Among the manufacturing, processing and logistics apprenticeships on offer in this sector is the brewer role, which encompasses different tasks and responsibilities depending on the employer, ranging from large-scale producers to micro-breweries. Alternatively, you could become a manufacturing engineer and support the activities involved in bringing design programmes into manufacture. This role is pivotal to the launch planning and smooth delivery of exciting new products or product refresh programmes.

There is also the food and drink advanced engineer degree apprenticeship, which will train you to deliver efficient, effective and high performance food and drink production processes and systems, as well as the international freight forwarding specialist apprenticeship, an administrative role in which you'll ensure that the company you work for and its clients remain compliant with all applicable customs, import and export laws and regulations.

<https://apprenticeshipguide.co.uk/apprenticeship-category/industry-sectors/manufacturing-processing-logistics-apprenticeships/>

<https://www.apprenticeships-in-sussex.com/>

# APPRENTICESHIPS LINKED TO TECHNOLOGY

- ARCHITECT
  - BLACKSMITH
  - BOATBUILDER
  - CARPENTRY & JOINERY
  - CONSTRUCTION QUANTITY SURVEYOR
  - FASHION STUDIO ASSISTANT
  - LIGHTNING PROTECTION OPERATIVE
  - ROBOTICS ENGINEER
  - SPACE ENGINEERING TECHNICIAN
  - STONEMASON
- AND MANY MORE!**



Interested in apprenticeships, but not sure what to do next? Take a look at our 'What Now?' guide...  
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