



Manufacturing and Product Design



Manufacturing is one of the largest employment sectors in the UK. It employs around 3.4 million people. Manufacturing includes food and drink, textiles and clothing, processing industries, printing, chemical engineering and pharmaceutical engineering. In fact, the manufacturing sector produces everything we use!

What's happening?

- Locally 59,500 people (10.5% of the working population) are employed in manufacturing.
- Employees in all science, engineering and technology occupations require a high level of numeracy due to the technical and mathematical basis of the jobs in the sector.
- There is an increasing need for higher level skills. Computer aided design (CAD) and other technical and IT skills are particularly in demand
- Employment in lower skilled manufacturing has declined in recent years because of the low cost of labour in other countries, particularly those in South East Asia and Eastern Europe.
- Female employees are under represented in this sector.
- Apprenticeships can be a good route into a skilled trade. They can offer a more vocational route into work and gaining qualifications. There are more apprenticeships in engineering and manufacturing than any other sector.

How much could I earn?

	Average annual salary (£s)
Assemblers/Routine Operators	£19,822
Chemist	£38,168
Mechanical Engineer	£38,426
Plant and Machine Operator	£23,900
Production Manager	£46,561
Quality Assurance Technicians	£24,668

Salary rates have been calculated using the average gross pay rates for full time workers. Figures are for United Kingdom. Averages can hide higher earnings. With training and career development, higher salaries can be achieved. Source: Annual Survey of Hours and Earnings 2008, O.N.S., © Crown Copyright.

What we think will happen

- The impact of technological change will increase the demand for professional and technical skills.
- There will be an increased demand for more flexible 'multi-skilled' workers, who have both electrical and mechanical engineering skills.
- Skills shortages within the industry are likely to become more severe in the next five to ten years if more young people do not enter the industry, as the current workforce is an ageing one.
- Environmental checks are becoming more common. Businesses are increasingly required to reduce toxic emissions and waste.

Do you want to work in Manufacturing and Product Design? Is this you?

- Good at communicating ideas and theories
- Always pay attention to detail
- Interested in craft, design and technology

Some job suggestions

- Assembler
- Design and Development Engineer
- Laboratory Technician
- Machine Operative
- Plastics Process Operative
- Printer
- Production Manager
- Quality Controller/Inspector

Routes into Manufacturing and Product Design

Level 1 (Foundation)	Level 2 (Intermediate)	Level 3 (Advanced)	Level 4 (Higher)
GCSE Grades D – G BTEC Introductory Diploma NVQ 1 Foundation Diploma	GCSE Grades A* – C BTEC First Diploma NVQ 2 Apprenticeship Higher Diploma	A Level BTEC National Diploma NVQ 3 Advanced Apprenticeship Advanced Diploma	HND Foundation Degree First Degree NVQ 4

The **Diploma in Manufacturing and Product Design** will help young people understand manufacturing products and processes and support them to develop the skills that will help them work in a wide range of careers. The Diploma includes at least 10 days work experience.

See: www.manufacturingdiploma.co.uk

Check with your school or Connexions Personal Adviser when this will be on offer in your local area.

Note: there are a number of ways of training for this area of work; the new Diploma is just one of these. See Routes into Manufacturing and Product Design for the options.

Want to know more?

Apprenticeships – www.apprenticeships.org.uk
or call the **helpline on 08000 150600**

Engineering Construction Industry Training Board
– www.ecitb.org.uk

Enginuity – www.enginuity.org.uk

Manufacturing and Product Design Diploma
– www.manufacturingdiploma.co.uk

SCENTA - Science, Engineering and Technology
– www.scenta.co.uk

SEMTA - Sector Skills Council for Science, Engineering and Manufacturing Technologies – www.semta.org.uk

Society of Women Engineers – www.swe.org.uk

The Diploma – www.direct.gov.uk/diplomas

" We are looking forward to seeing talented young people in the market with the skills we need clearly identified and developed."

Jonathan Cooper, Technical Training Manager, Cadbury Trebor Bassett.

Want to speak to somebody?

Go to www.connexionswest.org.uk for addresses of Connexions West of England local centres or contact Connexions Direct. Connexions Direct can offer you all the information and advice you need to make the decisions and choices in your life.

Connexions Direct: **080 800 13 2 19** Text: **07766 4 13 2 19**

Webchat/Email: www.connexions-direct.com