

Labour Market Intelligence Series

Your guide to manufacturing and advanced engineering



Overview:

Manufacturing includes the production of goods, right through from their beginning as raw materials to after sales services. Nowadays this is usually high-tech production on a large scale. Most manufacturing processes are automated to ensure that the goods meet quality standards and can be produced in large enough volumes to meet customer demand. Advanced manufacturing involves the use of technology to improve products and/or processes. Depending on the size of the company and the demand for products, manufacturing workers often work on shifts, enabling production 24 hours a day 365 days year. Careers in this sector range from manual labour to very highly skilled jobs and management roles.



Future growth:

The predicted growth in low carbon technology, e.g. wind turbines, carbon capture and solar panels, plus new advances in specialist construction products, means that there could be many more opportunities for local manufacturing and advanced manufacturing companies to develop and manufacture new products for the supply chain. Which in turn means more employment opportunities. There are shortages in advanced manufacturing positions, especially for skilled engineers.



Advertised positions and salaries:

Electrical Engineer

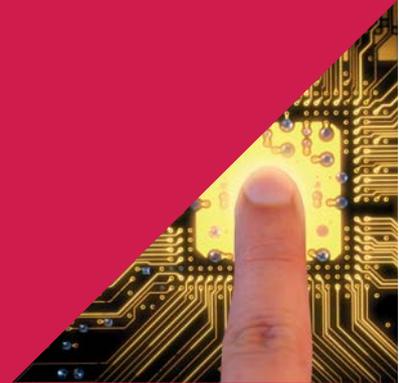
– design, build and maintain electrical control systems, machinery and equipment.

Earn from **£20,000 up to £40,000**

Mechanical Engineer

– research and develop new products; improve the performance and efficiency of existing products.

Earn from **£20,000 up to £50,000**



Production Manager

– plan and oversee production activities and monitor efficiency.

Earn from **£25,000 up to £40,000**

Food Scientist or Technologist

– create new food products, then test them and advise on their production.

Earn from **£20,000 up to £45,000**



Sales and Marketing Manager

– present and promote products; forecast sales targets.

Earn from **£20,000 up to £30,000**



Site Manager

– responsible for the safe and efficient operation of all plant machinery and equipment including, production, engineering, staff and product transportation.

Earn from **£39,000 up to £50,000+**

Courses related to Sector:

Level 2/BTEC/GCSE

Engineering
Engineering Manufacturing
Maths
Science

Level 3/A Level

Physics
Maths
Further Maths

Level 4/HE

Engineering (Open University, University of Bristol)
Design and Innovation (Open University)
Mechanical Engineering/Advanced Materials (University of Southampton, Bath College, Swindon College)
Aerospace Engineering (University of Bristol, University of Bath, City of Bristol College, University of the West of England)



Skills, qualities and qualifications:

There are a range of ways to get into the manufacturing and advanced engineering sector; having qualifications in the sciences, design and technology, engineering and maths are a start. Often employers will also be looking for a range of employability skills such as: good communication skills, being able to problem solve, being organised, work well in a team and able to plan effectively. Being able to give examples of your skills will really help you at application stage and at interview.

Apprenticeships

Types of Apprenticeships

Energy assessment and energy conservation are just a few different Apprenticeships available in environmental technologies. You might be familiar with some of the choices, but there are plenty of others that might just surprise you.

Levels of Apprenticeship

- Level 2 - equivalent to GCSE's
- Level 3 - equivalent to A Levels
- Level 4 - equivalent to Foundation Degree

An Apprenticeship to Level 2 takes two years to complete. Apprentices may continue for an additional year to achieve Level 3.

Level 4 is for those who want to progress into Technical, Design and Management careers.

Further information on Apprenticeships visit:
<https://workwiltshire.co.uk/apprenticeships/>

Search and apply for Apprenticeships:
www.gov.uk/apply-apprenticeship

Apprenticeships in manufacturing and advanced engineering include but are not limited to:
www.apprenticeships.gov.uk/

Engineering Design & Draughtsperson L3

Engineering Technician L3

Electrical Power Network Engineer L4

Nuclear Technician L5

Rail Engineering Technician L3

For a full list visit:

www.gov.uk/government/collections/apprenticeship-standards#apprenticeship-standards-approved-for-delivery



Views from the sector:

"An ageing workforce will remain an ongoing challenge for the sector in 2016. Ensuring that the UK has a new wave of skilled workers, adept at using the latest technologies, is crucial to ensuring the UK automotive industry remains competitive. According to the government, predicted growth in vehicle and engine production next year will drive demand for over £3bn car components in the UK alone. In order to capitalise on this demand, both manufacturing companies and Tier 1 and Tier 2 component manufacturers must nurture engineering skills and new talent."

Stuart Apperley, Director of automotive at Lloyds Bank.

www.am-online.com/news/market-insight/2015/12/11/ag-eing-workforce-and-low-carbon-technology-to-pose-challenges-for-industry

Where to study:

The Open University, University of Bristol, University of Southampton, Bath College, Bridgwater College, City of Bristol College and the University of the West of England offer a range of engineering courses.

The Open University, Bournemouth University also offer design and innovation courses.

Other local universities may also offer related courses, check websites and prospectuses for details.

For more information, follow these useful links:

www.prospects.ac.uk/job-profiles/manufacturing-engineer

www.careerplanning.about.com/od/occupations/p/engineer.htm

www.asme.org/engineering-topics/articles/manufacturing-processing/5-job-areas-consider-advanced-manufacturing

Wiltshire employers:

The map below shows some of the Manufacturing and Advanced Engineering employers in Wiltshire. This is not a definitive list and there are other employers across the county.



- | | |
|---------------------------------|-----------------------------|
| 1 Honda of the UK Manufacturing | 8 Latchways |
| 2 Dyson Ltd | 9 Airsprung Group |
| 3 QinetiQ | 10 Chemring Countermeasures |
| 4 Hermin Miller | 11 Naim Audio |
| 5 Cross Manufacturing | 12 Knorr-Bremse |
| 6 Siemens Rail Automation | 13 LF Beauty |
| 7 Cooper Tire and Rubber Co | |

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