Advanced Manufacturing

in The Marches (Shropshire, Herefordshire, Telford and Wrekin)

National Careers Service
Helping you take the next step

Advanced manufacturing and engineering creates the hi-tech products of the future and plays a vital role in the UK economy. The sector is looking for people who can problem solve and innovate so that the country can maintain its global reputation.

Local Overview

When it comes to innovation and industry, **the Marches is where it all began**, with the birthplace of the Industrial Revolution right here in Ironbridge!

It's no surprise that the heart of the country is still home to a wide range of engineering and advanced manufacturing companies.

Key specialisms include:

- agri-tech
- machinery and equipment
- advanced materials
- metals and metal products
- plastics
- military vehicles
- motor vehicles
- technical testing.

Statistics
Advanced manufacturing employs over **29,600 people in the area**. Almost 70% of those jobs are in the production of plastic products, metals, machinery, materials and automotive equipment.

Employment in the sector is highly concentrated in Telford and Wrekin, which **accounts for 43% of all advanced manufacturing and engineering employment in the Marches area**.

Shrewsbury, Bromyard, South Herefordshire and Bridgnorth are other employment hotspots.

Almost a third of the current workforce is **above the age of 50,** so the advanced manufacturing sector will need to recruit more people to keep going from strength to strength.

Educational Institutions
There is a wide range of colleges, private training providers and higher education establishments that offer vocational and academic engineering courses and relevant apprenticeships in the area including:

- Harper Adams University, which is at the forefront of the agri-tech R&D
- the University of Wolverhampton and its Centre of Advanced Manufacturing at Telford Innovation Campus
- the New Model Institute for Technology and Engineering (NMITE)
- the Marches Centre of Manufacturing & Technology.

There are a range of education and training providers in the area and National Careers Service can support you to find the right course.

Future trends

Advanced engineering and manufacturing is creating our future world!

New digital technologies in robotics, big data, artificial intelligence, virtual and augmented reality, and 3D printing are transforming the sector.

In all advanced manufacturing and engineering related industries, there is a trend towards increased automation and connectivity.

While technological advances mean that some jobs will become automated, there is likely to still be plenty of roles at all levels for those looking to work in this sector.

Demand for high-skilled workers in advanced manufacturing is high and is expected to increase. There are skills shortages across many engineering roles.

Nationally, there is an annual shortfall of 37,000 to 59,000 engineering graduates and technicians to fill core engineering roles.

Local employers

1. Ricoh

2. BAE Systems

3. Bischof and Klein

4. Bridgnorth Aluminium

5. Caterpillar

6. Cedo

7. DENSO

8. Fullwood Packo

9. GKN

10. Grainger and Worrall

11. Magna International (Cosma Castings and Stadco)

12. Makita UK

13. McConnel

14. Ricoh

15. Schneider Electric

16. Special Metals

Job roles

AI (artificial intelligence) engineer

aerospace engineer

aircraft fitter

auto electrician

automation engineer

automotive engineer

CAD technician

chemical engineer

civil engineer

data scientist

design engineer

driverless vehicle technician

electronics technician

maintenance fitter

materials technician

mechanical engineer

production plant manager

nuclear engineer

paint sprayer
physicist

polymer technologist

quality control technician

rail engineering technician

research and development manager

robotics engineer

sheet metal worker

technical author

Skills and qualities

In advanced manufacturing, employers are particularly looking for:

- advanced digital and ICT skills
- an analytical and logical approach to solving problems
- good attention to detail
- good communication skills
- creativity and design
- an interest in maths, science and technology
- presentation skills
- project management skills
- ability to speak other languages
- teamwork and interpersonal skills
- technical and practical skills
- thinking and reasoning skills

Routes into this sector

Ways to get into this sector will vary depending on the job role.

> Apply directly for some roles that don't ask for specific qualifications or ask for GCSEs – basic digital/IT skills may help. An agency job may also be a way in.

> Choose a college course at level 3 (A level equivalent) or level 4 to add to your qualifications.

> An apprenticeship could be a good route in - from engineering operative (intermediate apprenticeship), maintenance technician and machining engineer (advanced apprenticeship) to materials process engineer (degree apprenticeship). Always check the requirements for each individual apprenticeship.

> For some roles, employers will look for someone who has a university degree but also check to see if a higher or degree apprenticeship route is an option for a graduate-level job.

Work your way up to roles such as supervisor or manager by training on the job.

What could you earn?

3D printing technician
£18,000 to £33,000

Chemical engineer
£29,000 to £60,000

CNC machinist/operator
£15,000 to £30,000

Electronics engineer
£21,000 to £65,000

Manufacturing supervisor
£18,000 to £35,000

Mechanical engineer
£22,000 to £55,000

Production manager
£20,000 to £40,000

Project manager
£22,000 to £70,000

Quality assurance technician
£23,000 to £55,000

Robotics engineer
£27,500 to £55,500

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Find out more

For more information about the labour market in your area or in a particular sector you can speak to one of our expert careers advisers by calling 0800 100 900.

Visit our website **https://nationalcareers. service.gov.uk** to access over 800 job profiles, online resources and digital tools, or to contact us via webchat or email.