

Advanced Manufacturing and Engineering

Labour Market Information



The West Midlands is an exciting place to be when it comes to careers in advanced manufacturing and engineering. 50% of the UK's automotive industry is based in the Midlands and more than a quarter of the UK's aerospace sector is based here. Hundreds of opportunities are being created by local employers and colleges for people to develop the skills needed to access the many jobs that will be made available over the next decade.

Important facts about the engineering and manufacturing sectors

- Around 182,000 people with engineering skills are needed in the UK each year to 2022¹.
- The sector is working to attract more women, and people from a wider range of backgrounds, to become engineers.
- The automotive (motor vehicles) sector employs around 814,000 people across the UK - 169,000 of them directly in manufacturing. It is expected to need 50,000 more by 2020, half of those will be to build connected and driverless vehicles².
- HS2 will create thousands of jobs for the West Midlands in this sector – both directly and in the supply chain.

¹ Engineering UK

² SMMT

Job Titles

aerospace engineer • aircraft fitter
 • auto electrician • automotive engineer • biomedical engineer • CAD technician • chemical engineer • civil engineer • design engineer • driverless vehicles technician • electrician • electronics engineer • machine printer • materials technician • mechanical engineer • motorsport engineer • nuclear engineer • paint sprayer • physicist • polymer technologist • quality control technician • rail engineering technician • rail track maintenance worker • research and development manager • sheet metal worker • structural engineer • technical illustrator • toolmaker • welder

Skills required

Some employers report that they struggle to find candidates with the right people or personal skills. In advanced manufacturing and engineering employers are particularly looking for:

Lean Manufacturing	Turning
Engineering Management	Lathes
Leadership	Engineering Drawing
Building Services Engineering	Tooling
Mechanical Engineering	Repairing (Computer Systems)
Maintenance	Testing
Communications	Hydraulics
Heating And Cooling	Engineering
Computer-Aided Design	Electrical Engineering
Management	Maintenance
SolidWorks (CAD)	Installations
3D Modeling	Manual/Mechanical
AutoCAD	Grinding
Machining	Electrical Wirings
Computer Numerical Control (CNC)	Engineering Drawing
Programmable Logic Controllers	Polishing

What you could earn

These are the average salaries you might expect to earn in manufacturing and engineering*. Salaries are likely to be lower for new starters and higher for experienced workers.

Metal working machine operative **£22,800**

Quality assurance technician **£25,700**

Motor vehicle technician **£26,850**

Motor vehicle assembler **£34,000**

Engineering technician **£35,550**

Design and development engineer **£40,100**

CNC (computer control) programmer **£41,500**

Electronics engineer **£43,850**

*Annual Survey of Hours and Earnings 2017

Future Trends

The sector is becoming more hi-tech and the UK is playing its part in leading the way in innovation and cutting-edge technology. This means employers are on the look-out for people with:

- STEM qualifications
- creative talent
- problem solving skills
- digital skills
- flexibility

These are all areas where innovation will create new roles: robotics | cyber security | biomedical technologies | telecommunications and satellites | driverless vehicles | smart energy | agri-tech | low-carbon technologies | intelligent mobility technologies | mechatronics | coding

We can also expect to see growth in these areas:

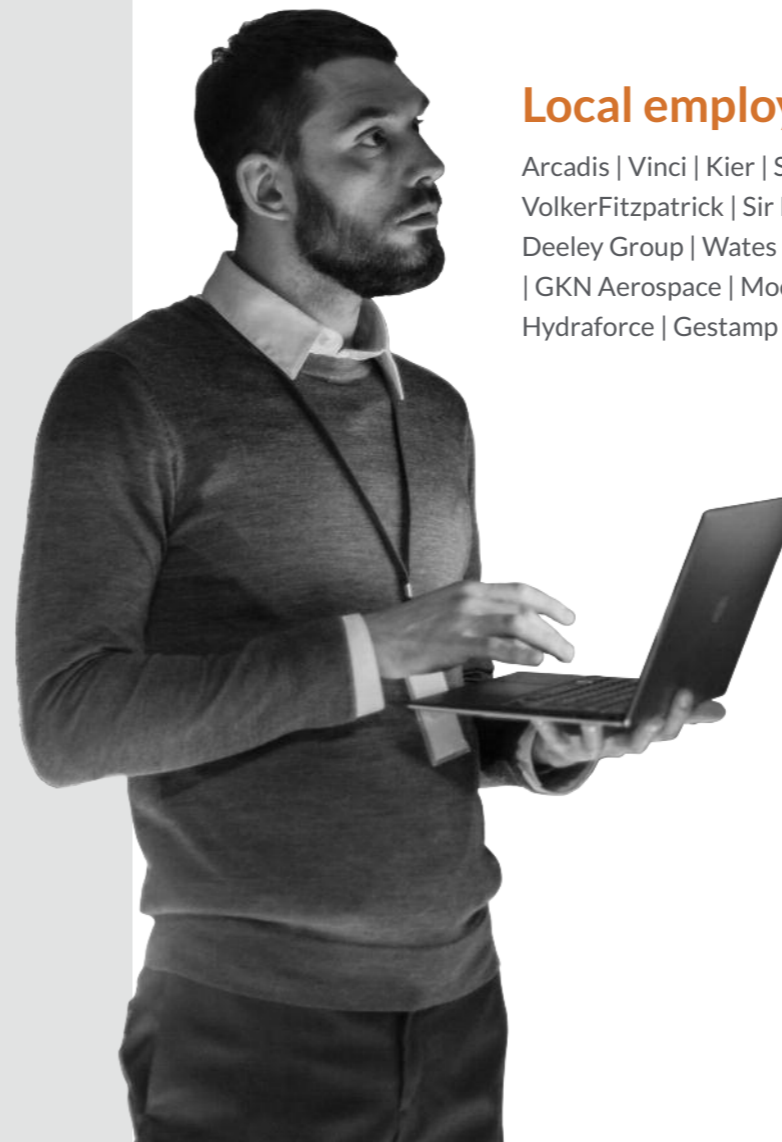
- smart design and manufacturing
- low carbon and sustainable materials
- energy-saving homes
- new materials and techniques
- 3D modelling and printing
- big data and analytics
- off-site manufacturing
- robotics
- smart sensors
- artificial intelligence
- virtual and augmented reality
- autonomous (driverless) vehicles and drones

Local employers

Arcadis | Vinci | Kier | Skanska | RGB Group | Westpoint Construction | Lovell | Bovis | VolkerFitzpatrick | Sir Robert McAlpine | Barratt Homes Mercia | Benniman | Bouygues | Deeley Group | Wates | Jaguar Land Rover | Rolls Royce | MG Motor | Goodrich | BMW | Timet | GKN Aerospace | Moog Aircraft Group | ThyssenKrupp Aerospace | Maier Ltd | Changan | Hydraforce | Gestamp Tallent | Arcadis | IMI

Jobs in demand

- Engineer: mechanical; electrical; electronics; design & development; production and process; quality control & planning
- Engineering Project Manager
- Engineering Technician
- Production Manager
- Welder and other metal workers
- Vehicle Technician
- Machine Operative



Routes in

The routes can depend on the type of work you are interested in. Qualifications such as GCSEs, A levels, NVQs, BTECs, HNC/Ds and a degree can all lead to work in this sector; some are more hands on than others. As well as BTECs, HNC/Ds or a degree route, higher and degree apprenticeships will play a larger part in training the engineers and technicians of the future allowing an employer to train somebody up while working in partnership with a higher education institution. There are around 125 apprenticeship types in the new standards across the whole manufacturing and engineering sector. Check out which courses or apprenticeships local colleges and universities offer and search for employer apprenticeship vacancies on www.findapprenticeship.service.gov.uk.

Jaguar Land Rover runs the 'Young Women in the Know' scheme aimed at encouraging women into the sector.

Career Learning Pilot

The **Career Learning Pilot** can support you to grow your skills and boost your income. Speak to a Careers Adviser to discover the next steps towards your career goals.

Research shows that people qualified to Level 3 can earn 10% more than those without and advanced apprentices at Level 3 can earn £117,000 more over their career.*

*Prospects.ac.uk

Talk to **National Careers Service** on **0121 296 5550** or email: clpwestmids@prospects.co.uk

Or visit www.wmca.org.uk/what-we-do/productivity-skills



FINDING OUT MORE

www.semta.org.uk/careers

www.tomorrowsengineers.org.uk

www.futuremorph.org/my-future-finder

www.wisecampaign.org.uk

www.engineeringuk.com/research

www.jaguarlandrovercareers.com

www.automotiveapprenticeships.co.uk