

Level 4

APPRENTICESHIP STANDARD

Engineering Manufacturing Technician (Chesterfield)



For careers in Engineering Manufacturing

- Manufacturing Engineer Quality
- Manufacturing Production Engineer
- Manufacturing Procurement Engineer
- Quality Engineer
- Costing Engineer
- Test and Commissioning Engineer
- Installation Engineer
- Process Engineer
- Production Support Engineer

Standard overview

Engineering manufacturing technicians provide products and services throughout a wide range of sectors such as automotive, chemical processing, land systems, material manufactures and their respective supply chain.

Organisations need engineering manufacturing technicians to produce and test products, processes and/or procedures to meet a customer specification in terms of quality, cost and delivery.

Engineering manufacturing technicians gather information and data from a range of sources and analyse the information/data. They will make decisions, solve problems and produce and/or update technical documentation, reports or specifications covering areas such as quality, reliability, production schedules/targets, costing or other technical documentation that informs others.

Technicians use a range of tools and techniques to support decision making and solve problems that are often complex and non-routine. They also have a responsibility to identify and contribute to making improvements such as business processes, procedures and methods of working.

This standard would be suitable for those with a Level 3 qualification a related industry sector or those with extensive experience within engineering manufacturing.

Standards – the benefits

At Learning Unlimited, we provide high quality training and development solutions for organisations across the UK. The Level 4 apprenticeship standard offered by Learning Unlimited brings together a range of benefits. From start to finish, we work with your business to tailor our training to meet your needs. With an excellent track record in delivering training to a variety of organisations and businesses, we can find a solution to help you take your staff to the next level.

Entry requirements

- Individual employers will set the selection criteria for their apprenticeships.
- Five GCSEs at grade C/4 or above (including English and science, and a grade B/6 in maths) or a relevant Level 3 engineering qualification.

Duration

- 36 months on programme delivery plus 3-6 months for End Point Assessment

Workplace behaviours development

- Operates in a systematic, proactive and transparent way.
- Actively promotes the case for the adoption of emerging and advanced engineering and manufacturing technologies to optimise performance.
- Complies with statutory and organisational health and safety regulations and policies at all times.
- Accepts responsibility for their workload with a responsible approach to risk. Demonstrates a high level of motivation and resilience when facing challenge.

End Point Assessment (EPA)

- Observation with questioning
- Professional discussion supported by portfolio of evidence

Skills and knowledge development

- Problem solving tools/techniques such as practical problem solving (PPS), root cause analysis (RCA) and process failure mode effects analysis (PFMEA).
- How Industry 4.0 will impact organisations, including the integration of automation, digital systems and manufacturing engineering systems.
- Quality management systems used such as ISO9001, AS9100, ISO 14001 and TS16949, its purpose and internal governance arrangements to ensure compliance.
- Use problem solving tools such as Root Cause Analysis (RCA).
- Analyse and interpret data and information in order to generate manufacturing engineering documentation such as Parts Per Million (PPM) quality adherence, cost analysis and test data.
- Use the approved process and quality compliance procedure to create or amend engineering and/or manufacturing documentation.

Qualifications or Industry Accreditation gained

- Pearson BTEC Level 4 Higher National Certificate in Engineering
- Pearson BTEC Level 4 Higher National Certificate in Manufacturing Operations

On completion, of this standard the apprentice will be eligible to apply for professional recognition (IET, Eng. Tech or IMechE/ Eng. Tech)

Delivery plan and apprentice progression

Throughout the apprenticeship, the apprentice is supported by a work-based tutor and employer mentor to ensure that they are progressing at the right pace and developing the skills and knowledge expected.

Months 1-12

- Apprentice sign up and induction
- On programme delivery of Level 4 Higher National Certificate in Engineering or Level 4 Higher National Certificate in Manufacturing Operations.
- Work-based visits each month building knowledge, skills and behaviours.
- Day release in college

Months 13-24

- Review of apprenticeship evidence
- Observation on skills and behaviours
- Professional discussion on knowledge and behaviours
- On programme delivery of Level 4 Higher National Certificate in Engineering or Level 4 Higher National Certificate in Manufacturing Operations.
- Day release in college

Months 25-33

- Portfolio of evidence
- Mock assessments
- Day release in college
- Completion of on programme delivery of Level 4 Higher National Certificate in Engineering or Level 4 Higher National Certificate in Manufacturing Operations.

Months 34-36

- Mock End Point Assessment
- Portfolio assessment
- End Point Assessment

Off-the-job training

Every apprenticeship includes off-the-job training – equivalent to one day per week. This takes place during time normally spent at work but does not include the usual daily duties and responsibilities carried out as part of their normal role. It can consist of work and tasks ranging from projects, lectures and seminars to day release, blended learning and training to use specialist equipment.

It can form part of regular weekly sessions or be combined for larger blocks of time, depending on the approach that works best for the employer.

The delivery plan is for illustrative purposes only and may be subject to change. Stage duration and completion will vary dependent upon the apprentices ability and/or employer requirements.

Progression

Upon successful completion apprentices will be eligible for the following job roles or further studies:

- Manufacturing Engineer Quality
- Manufacturing Production Engineer
- Manufacturing Procurement Engineer
- Quality Engineer
- Costing Engineer
- Test and Commissioning Engineer
- Installation Engineer
- Process Engineer