



TRAFFORD
COLLEGE



STOCKPORT
COLLEGE

ENGINEERING MANUFACTURING TECHNICIAN

Level 4,
Apprenticeship Standard

ELIGIBILITY / ENTRY REQUIREMENTS

Typically 5 GCSEs at grade 5 or higher including maths, English and science, or equivalent and/ or relevant experience.

This occupation is found in large and small engineering and manufacturing organisations providing products and services throughout a wide range of sectors, such as Automotive, Aerospace/Airworthiness, Chemical Processing, Land Systems, Marine, Maritime Defence, Materials Manufacturers and their respective supply chains. Research indicates that the sector needs to recruit approximately 124,000 engineers and technicians every year.

The broad purpose of the occupation is to provide specialist technical support for engineers, so that organisations can develop, produce or test new/existing products, processes, or procedures to meet a customer specification in terms of quality, cost and delivery, as efficiently and effectively as possible. 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, either internally or externally what needs to be done such as how a product must be designed, manufactured, tested, modified, maintained, stored, transported, commissioned or decommissioned.

APPRENTICESHIP REQUIREMENTS

Apprentices should have a range of skills and attributes including:

- Motivation to succeed within industry
- An awareness of the demands of the Apprenticeship
- Willingness to comply with employer/training provider terms and conditions of employment
- Have the ability to apply learning in the workplace
- Willingness to work with due regard to Health and Safety of self and others
- Effective communication with a range of people.



TYPICAL JOB ROLES IN THIS AREA INCLUDE:

Manufacturing Engineer Quality, Manufacturing Production Engineer, Manufacturing Procurement Engineer, Quality Engineer, Costing Engineer, Test and Commissioning Engineer, Installation Engineer.

KEY FACTS:	
Delivery location	Stretford Campus.
Typical duration	42 months.
Study mode/frequency	1 day per week at college day release plus assessment visits in the workplace.
Apprenticeship Standard	Upon completion the Apprentice will receive a Level 4 Engineering Manufacturing Technician Standard.
Knowledge and skills	<p>Knowledge:</p> <ul style="list-style-type: none"> • Problem solving tools/techniques. Such as practical problem solving (PPS), root cause analysis (RCA) and process failure mode effects analysis (PFMEA) • Effective communication techniques including listening and questioning • Use, benefits and applications of lean methods and tools used in manufacturing • 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 • Different manufacturing methods used, their applications • Core engineering principles such as mathematics, science, mechanical and electrical/electronic applications • Statutory and organisation health and safety policies, procedures and regulations • Engineering and manufacturing related documentation used • Different production methods used and their applications such as single, batch • The impact of sustainability and environmental efficiency and how such matters influence manufacturing decisions <p>Skills:</p> <ul style="list-style-type: none"> • Read and extract engineering and manufacturing related data and information • Use project management tools, such as Strengths, Weaknesses, Opportunities, Threats (SWOT), stakeholder matrices, risk mapping, radar chart and summary risk profiles • Use problem solving tools such as Root Cause Analysis (RCA) • Communicate using the appropriate method for the audience • Use the approved process and quality compliance procedure to create or amend engineering and/or manufacturing documentation • Use lean tools and techniques • Apply documentation control processes and procedures • Use financial planning, recording and review processes and documentation such as departmental budgets, estimating, cost control, cost forecasting, and investment appraisal • Use computer based software system/packages such as Computer Aided Design
Competency/skills or behaviours	<ul style="list-style-type: none"> • Complies with statutory and organisational health & 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 • Creates and maintains positive, professional, trusting and ethical working relationships with their team and the wider range of internal, external and connected stakeholders
Functional Skills	Functional Skills will be required for English and maths at Level 2 if you have not attained a GCSE at grade 4 or above (or equivalent).
Assessment	End point assessment will include an observation and discussion, portfolio and professional discussion.

For further information contact the Apprenticeship Team on **0161 886 7461** or email apprenticeships@tcg.ac.uk