Apprenticeship Standard for: Technical Support Technician – Advanced Manufacturing and Engineering

Occupational Profile

Technical Support Technicians work as part of a team to provide technical support and expertise for all areas of the Engineering and Manufacturing function. Their key role is to ensure products are produced to the required specification and/or systems remain operational within their designated field. They do this by discussing /consulting with relevant people, finding solutions to problems, identifying areas for improving the business, collating feedback from end user or customer, prepare a plan of action for implementation of the agreed solution, communicate the proposed solution to relevant people, obtaining feedback where appropriate, ensure that all information is documented to provide an audit trail and able to implement preventive measures, where applicable, to ensure no recurrence of the problem.

Technical Support Technicians can work across all different types of advanced manufacturing businesses and functions including communications software, test, analysis tools, measurement, off line programming, process control, performance and continuous improvement solutions, capacity planning, production scheduling/planning, product technical applications and capability, technical sales and marketing support, product development and innovation, engineering drawing, purchasing and/or supply of goods or services for engineering activities, quality control, inspection and e-commerce technologies as required. They work with minimum supervision, taking responsibility for the quality, accuracy and timely delivery of the work they undertake. They work closely with Internal or external customers, managers, team leaders, production operatives etc.; in order to ensure that all are supported effectively in the production of, or continued operation of products or systems within their designated field.

Examples of occupations include: Manufacturing engineering support technicians; Field support technicians; Quality assurance technicians.

Occupational Requirements (Knowledge & Skills)

1. Understanding the structure, properties and characteristics of common materials used in the manufacture of components and assemblies and how they operate within their working environment
2. Understanding the typical problems that can occur during the manufacturing/engineering and engineering support process and how they can be resolved, Using universally recognised tools and techniques. Such as, Practical Problem Solving, Statistical Process Control, Failure Effect Mode Analysis, 5 Whys.
3. Determining the most efficient and effective approach to support the business/Customer using structured processes and techniques
4. Complying with statutory, quality, organisational and health and safety regulations while carrying out/supporting manufacturing/engineering processes
5. Reading and interpreting engineering data: reading and interpreting engineering drawings, specifications and computer generated information in order to determine what has to be produced and to what specification
6. Obtaining, checking and planning using the appropriate documentation (such as job instructions, drawings, quality control documentation)
7. Selecting and using a range of measuring, diagnostic and testing equipment to check components and systems are produced/operating to the required quality, accuracy and performance levels as appropriate
8. Business improvement techniques : recommending and contributing to the designing and implementation of new or revised manufacturing processes, procedures or ways of working in order to be more efficient and cost effective

9. Employer tailored skills as required such as undertaking equipment/asset care and/or Preventative Planned Maintenance processes and procedures
10. Understanding the requirements of the customer (Internal/External) and support using the appropriate tools, equipment and processes.

Note: More detail on the specific level of skills, knowledge and behaviours required to be achieved and assessed to demonstrate full occupational competence in the foundation and development phase of the Apprenticeship can be found in the Employer Occupational Brief

Occupational Requirements: Employee Behaviours

1. **Personal responsibility and resilience:** comply with health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload, stay motivated and committed when facing challenges
2. **Working effectively in teams:** make an effort to integrate with the team, support other people, and consider implications of their own actions on other people and activities, work effectively to get the task completed.
3. **Effective communication and interpersonal skills:** is an open and honest communicator, communicate clearly using appropriate methods, listen well to others, have a positive and respectful attitude.
4. **Focus on quality and problem solving:** follow instructions and guidance, demonstrates attention to detail, follow a logical approach to problem solving, seek opportunities to improve quality, speed and efficiency.
5. **Continuous development:** reflect on skills, knowledge and behaviours and seeks opportunities to develop, adapt to different situations, environments or technologies, has a positive attitude to feedback and advice

Entry Requirements

Individual employers will set the selection criteria for their apprenticeship. In order to optimise success, candidates will typically possess four GCSEs C grade (or equivalent) or above on entry including English, Maths and a Science. Apprentices without Level 2 Maths and English must achieve this prior to taking the end – point assessment.

Duration of Apprenticeship

Typically 42 months - timescales may reduce if an apprentice has prior relevant qualifications/experience.

Qualifications and Development

After a period of foundation skills and technical knowledge development all apprentices will be required to achieve the following qualifications (working titles -currently in development)

- Level 2 Advanced Manufacturing Engineering (Foundation Competence)

After a further period of skills and technical knowledge development all apprentices will be required to achieve the following qualifications (working titles - currently in development)

- Level 3 Advanced Manufacturing Engineering (Development Competence)
- Level 3 Advanced Manufacturing Engineering (Development Technical Knowledge)

All of the qualification requirements in the foundation and development phases are mandatory outcomes for the completion and final certification of the Apprenticeship Standard. Further detail can be found in the Employer Occupational Brief which is an annex to the Assessment Plan. The apprenticeship timeline should allow for apprentices to progress on to a Level 4 HNC Engineering qualification if this was deemed suitable for the individual and their company

This apprenticeship will be recognised by relevant Professional Engineering Institutions at the appropriate level of professional registration (EngTech).

Level and Review

This Apprenticeship Standard is at Level 3 and will be reviewed after three years to ensure it continues to meet employers' requirements and provides the basis for progression to higher qualifications and or job roles.