

ENGINEERING TECHNICIAN (TECHNICAL SUPPORT TECHNICIAN) - ELECTRICAL APPRENTICESHIP LEVEL 3



For new or existing staff

Technical Support Technicians, work as part of a team to provide technical support and expertise for all areas of the Engineering and Manufacturing function 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. The requirements are designed to offer stretch and progression. They will be able to work with minimum supervision, taking responsibility for the quality, accuracy and timely delivery of the work they undertake. They will be proactive in finding solutions to problems and identifying areas for improving the business.

Qualification

EAL Level 2 Diploma in Advanced Manufacturing Engineering (Foundation Competence)
EAL Level 3 Diploma in Advanced Manufacturing Engineering (Development Competence) – Technical Support
EAL Level 3 Diploma in Advanced Manufacturing Engineering (Development Knowledge)

Completers may want to progress to Engineering Apprenticeship Level 4 or HNC

Delivery model and duration:

Apprentices will attend college for two days per week over two years. Training, assessments and observations will also be completed in the workplace.

Duration: 42 months + 3 months for End Point Assessment

Ideal for:

- Electronics Engineer
- Software/ Hardware Engineer
- Electrical/Electronic Technician
- Electronic Design Engineer

The apprenticeship will cover the following core areas:

- Maintaining electronic equipment and systems
- Producing drawings using a CAD system
- Conducting business improvement activities
- Health and Safety
- Wiring and testing programmable controller based systems
- Features and applications of electrical machines
- Assembling and testing electronic circuits
- Monitoring and fault diagnosis
- Mathematics for engineering technicians

Entry Criteria:

- GCSEs in English, maths and science at grade 9-4 or A*-C

Benefits to business:

- Increase future productivity
- Keep the business up to date with the latest knowledge and innovative practice
- Deliver on the job training to employees tailored to business needs
- Develop and retain existing staff by offering support and a fresh perspective

Benefits for learners:

- Gain high level technical knowledge and practical experience by combining on the job training with academic study
- Gain a valuable, national-recognised qualification
- Fill skills gaps in businesses

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Gloucestershire College

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End Point Assessment

The End Point Assessment will test the entire Standard, and be undertaken as follows:

- An occupational Competence Validation Interview (Viva) drawing from a portfolio of evidence of occupational competence
- Professional competence assessment undertaken by independent assessor(s)
- Final employer endorsement of occupational and professional competence and overall completion of the apprenticeship

Unit and Overview grid

Knowledge

Understanding the importance of complying with statutory, quality, organisational and health and safety regulations

Understanding of general engineering/manufacturing mathematical and scientific principles, methods, techniques, graphical expressions, symbols formulae and calculations used by engineering technicians

Understanding the structure, properties and characteristics of common materials used in the sector

Understanding the typical problems that may arise within their normal work activities/environment

Understanding approved diagnostic methods and techniques used to help solve engineering/manufacturing problems

Understanding the importance of only using current approved processes, procedures, documentation and the potential implications for the organisation if this is not adhered to

Understanding and interpreting relevant engineering/manufacturing data and documentation in order to complete their job role

Understanding the different roles and functions in the organisation and how they interact

Understanding why it is important for an organisation to continually review their processes and procedures

Understanding mathematical techniques, formula and calculations used in a technical support environment

Understanding the methods and techniques used to evaluate technical data and documentation

Understanding how to identify that the data and documentation being used is current and up to date

Understanding the procedure to be used for making changes to issued documentation

Understanding where and how to source other areas of technical expertise/information to help solve technical problems

Understanding the requirements of the customer (internal/external) and support using the appropriate tools, equipment and processes

Components

- EAL Level 2 Diploma in Advanced Manufacturing Engineering
- EAL Level 3 Diploma in Advanced Manufacturing Engineering – Technical Support
- EAL Level 3 Diploma in Advanced Manufacturing Engineering

Skills

Obtaining, checking and using the appropriate documentation (such as job instructions, drawings, quality control documentation)

Working safely at all times, complying with health, safety and environmental legislation, regulations and organisational requirements

Planning and where applicable obtaining all the resources required to undertake the work activity

Undertaking the work activity using the correct processes, procedures and equipment

Carrying out the required checks (such as quality, compliance or testing) using the correct procedures, processes and/or equipment

Dealing promptly and effectively with engineering/manufacturing problems within the limits of their responsibility using approved diagnostic methods and techniques and report those which cannot be resolved to the appropriate personnel

Completing any required documentation using the defined recording systems at the appropriate stages of the work activity

Restoring the work area on completion of the activity and where applicable return any resources and consumables to the appropriate location

Produce technical documentation that contains all the relevant and necessary data and information required for the technical support activity being carried out

Presenting technical documentation in the required format

Ensuring that codes, symbols and other references used in the technical documentation follows agreed UK/international conventions

Saving and storing technical documentation in the correct format, location in accordance with organisational and/or customer requirements

Making any changes/amendments to the technical documentation using agreed quality assurance control procedures

Developing effective business and/or customer relationships

Providing technical advice and guidance to others

Contributing to the business by identifying possible opportunities for improving working practices, processes and/or procedures