



## Higher Apprenticeship, Electrical/Electronic Technical Support Job Description Electrical/Electronic Technical Support Engineer, Level 6

(Job Code and Level: MFGMAI003.00)

### **Definition:**

Learn to ensure that electrical and electronic equipment run to their maximum efficiency and output. This includes total preventative maintenance and managing day to day operations.

### **Overall Purpose of the Role:**

Undertake a programme of training to gain full working knowledge in all aspects of electrical and electronic Maintenance including learning to diagnose faults leading to repair, as well as maintaining facilities process equipment. To assist and support with planned and reactive maintenance as well as liaise with internal stakeholders and subcontractors. Works very closely with production engineering and manufacturing engineering for the implementation of new plant equipment and processes.

### **Duration:**

Typically the duration of this apprenticeship is 5 to 6 years. This duration may be reduced for a candidate with previous relevant experience and/or someone already part qualified. Alternatively this may also be a progression route from a relevant Advanced Apprenticeship.

### **Key Responsibilities:**

#### **General and Task Management**

- Electrical/Electronic Technical Support Engineers primarily support manufacturing in both assembly and in product design and development.
- They support the activities involved in bringing the concept to life and resolving issues within manufacturing
- Typically they work closely with other engineers, suppliers and managers covering a broad range of support activity

On successful completion, progress to develop skills in:

- Project management in undertaking engineering activities
- Producing and working to engineering specifications and briefs, presenting and technical problem solving
- Scheduling and managing engineering activities
- Electrical/Electronic product manufacturing and testing
- Demonstrating technical and commercial management in planning and managing tasks and resources

### **Relationship Management**

- Support technicians and engineers
- Liaise and communicate with other departments

### **Self Management**

Occupational Behaviours: Modern high value engineering organisations require their apprentices to have a set of occupational behaviours that will ensure success both in their current and future roles and in meeting the overall company objectives. These required behaviours include:

- Safety mindset: This occupation sits within an industry with a high level of safety critical activities. There has to be strict compliance and a disciplined and responsible approach to manage, mitigate and avoid risk
- Strong work ethic: Positive attitude, motivated by engineering; dependable, ethical, responsible and reliable
- Logical approach: Able to structure a plan and develop activities following a logical thought process, but also able to quickly “think on feet” when working through them
- Problem solving orientation: Identifies issues quickly, enjoys solving complex problems and applies appropriate solutions. Has a strong desire to push to ensure the true root cause of any problem is found and a solution identified which prevents further recurrence
- Quality focus: Follows rules, procedures and principles in ensuring work completed is fit for purpose and pays attention to detail / error checks throughout activities
- Personal responsibility and resilience: Motivated to succeed accountable and persistent to complete task
- Clear communicator: Use a variety of appropriate communication methods to give/receive information accurately, and in a timely and positive manner
- Team player: Not only plays own part but able to work and communicate clearly and effectively within a team and interacts/ helps others when required. In doing so applies these skills in a respectful professional manner
- Applies Lean Manufacturing Principles: Continuous improvement in driving effectiveness and efficiency
- Adaptability: Able to adjust to different conditions, technologies, situations and environments
- Self-Motivation: A ‘self-starter’, who always wants to give their best, sets themselves challenging targets, can make their own decisions

- Willingness to learn: wants to drive their continuous professional development
- Commitment: Able to commit to the beliefs, goals and standards of their own employer and to the wider industry and its professional standards

### **Skills and Attributes:**

During the foundation stage the apprentice must develop a solid grasp of the engineering skills. These skills will not only prepare the apprentice for the workplace in demonstrating that they have the required manual dexterity to do their core role but their competencies are stretching and transferable and can be built upon over time. The skills required are:

- Comply with statutory regulations and stringent organisational safety requirements
- Produce components using hand fitting techniques
- Produce Electrical or Electronic Drawings using a Computer Aided Design (CAD) System
- Prepare and use lathes, milling and other general or specialist machines and High Tech equipment
- Wiring and testing electrical equipment, assembling and testing electronic circuits
- Use computer software packages to assist with engineering activities
- Produce engineering project plans
- Maintain and improve electrical equipment/systems

During the development stage they would hone their professional engineering skills, along with experimental/new product development, component investigation regarding costing, supplier support and design, development and test engineering. With all of these skills, they will be using a well-planned logical and systematic approach.

### **Qualifications and Experience Levels:**

- Individual employers will set the selection criteria for their Apprenticeships. In order to optimise success candidates will typically have 5 GCSE's at Grade C or above, including Mathematics, English and a Science, Technology or Engineering related subject, as well as A Levels at grade C or above in both a Mathematical based subject and a Science, Technology, Engineering or additional Mathematics related subject, or 90+ credits in an Engineering BTEC at level 3
- The apprentice will initially complete a Foundation Degree which would provide the foundation stage of the knowledge elements in the competence qualification. It will support the fundamental scientific and mathematical principles that equip apprentices with the understanding required to operate effectively and efficiently at high level within this sector. As a core the engineer needs to cover around 960 academic Guided Learning Hours, in order to have a solid grasp of;-
  - Mathematics and science for engineers

- Materials and manufacture
- 3D Computer Aided Design and Computer Aided Engineering
- How to undertake and apply business-led projects
- Understand actuators and sensors
- Electrical and electronic principles and electronic devices and applications
- Product improvement and engineering project management
- Digital electronics and microprocessors

For the Development Phase the apprentice will build on their foundation knowledge by completing a BSc (Hons) or BEng (Hons) in Engineering. Here they will expand their understanding to a higher level and work through specialised modules for this role.

### **Further Information:**

<https://www.gov.uk/government/publications/apprenticeship-standard-electricalelectronic-technical-support-engineer>

### **Example roles this job description may cover:**

- Graduate Electrical/Electronic Technical Support Engineer
- Placement Trainee Electrical/Electronic Technical Support Engineer
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