

Apprenticeship Standard for Food and Drink Maintenance Engineers

Occupation:

Food and Drink Mechanical Maintenance Engineer
Food and Drink Multi-skilled Maintenance Engineer

Programme duration: 3 to 4 years

Food and Drink Maintenance Engineering Role

The Food and Drink industry is an exciting place to be a Maintenance Engineer. World class companies in the industry use some of the most innovative, modern and technically automated equipment available to manufacture a wide range of food and drink products for consumers. Companies employ Mechanical and/or Multi-skilled Maintenance Engineers according to the type of products they make.

Food and Drink Mechanical Maintenance Engineers will mainly work with mechanical and electrical equipment and production systems. Food and Drink Multi-skilled Maintenance Engineers will work with mechanical and electrical equipment plus highly automated programmable control systems.

Both Mechanical and Multi-skilled Engineers need to maximise the benefits of the technology and equipment they work with. Depending on the type of product and plant in the company, engineering activities carried out will include routine maintenance, fault finding and diagnosis, testing and commissioning. They must ensure that maintenance activities contribute to optimising food and drink production levels.

Food and Drink Mechanical and Multi-skilled Engineers must ensure that all maintenance activities are conducted safely, and practices comply with food safety legislation in this highly regulated industry. They must understand the key features of working with consumable products and how they this affects food industry maintenance practices.

Food and Drink Engineers will work autonomously, taking responsibility for their own tasks and also work effectively in teams.

Food and Drink Maintenance Engineer Skills, knowledge and behaviours

At the end of their Apprenticeship, Food and Drink Mechanical Maintenance Engineers and Food and Drink Multi-Skilled Maintenance Engineers will demonstrate core food and drink maintenance technical skills, knowledge and behaviours.

Core Technical Skills

- Perform first line routine mechanical maintenance, including removing and replacing components, cleaning, lubrication, inspection and fault finding
- Apply 'best practice' techniques, eg condition monitoring and proactive maintenance
- Produce replacement components, using manual and machine processes
- Weld stainless steel and other materials used in food production equipment

Core Knowledge

- Food processing/manufacturing and product knowledge (to meet company requirements eg Dairy/Confectionery/Meat processing)
- Understanding of how to comply with regulations, including food safety and HACCP (Hazard Analysis and Critical Control Points)
- The impact of customer requirements and demands on the food supply chain
- Materials science, including the key features of raw materials, their uses in food production and types of equipment used to process them
- Principles of electrical systems, including their uses, safety and legislation
- Services and utilities knowledge, including the importance and impact of energy management and pollution control in food production.

In addition to the core technical skills and knowledge, Food and Drink Multi-skilled Maintenance Engineers, will demonstrate additional technical skills:

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Food and Drink Multi-skilled Maintenance Engineer Technical Skills

- Commission and perform maintenance of instrumentation/process control systems
- Perform first line electrical maintenance, including testing, fault finding, repairing and replacing components
- Perform maintenance of programmable control systems.

Core Behaviours

Food and Drink Mechanical and Multi-Skilled Maintenance Engineer Apprentices will demonstrate the following behaviours:

- Safe working: ensures safety of self and others, food safe, challenges safety issues
- Ownership of work: accepts responsibility, is proactive, plans work
- Pride in work: integrity, aims for excellence, time management
- Self-development: links own objectives to support the business, seeks learning and development opportunities
- Integrity and respect: for colleagues, good communication with managers
- Working in a team: builds good relationships with others
- Problem solving: takes responsibility until a solution is reached, challenges others, works to solve root cause of problems
- Responsiveness to change: flexibility to changing environment and demands
- Company/industry perspective: knowledge of company and food industry, acts as an ambassador
- Effective communication: with colleagues/managers, in writing, visually, verbally.

Entry requirements

Individual employers will set the selection criteria for their Apprenticeships. Most candidates will have 4 GCSE's at Grade C or equivalent, including Mathematics, English and a Science. If not set as an entry criterion, apprentices will achieve English and Mathematics at level 2 by the end of the apprenticeship.

Final Assessment and grading

Apprentices will be required to complete a synoptic independent assessment test at the end of their programme. The full Apprenticeship Standard will be graded pass, merit or distinction.

Progression and Professional recognition

On completion of this Standard, apprentices may progress to a wide range of employment opportunities, or to Higher Education (eg MEng in Food Engineering).

This Standard has been designed to deliver sufficient Underpinning Knowledge and Understanding (UKU) and allow apprentices sufficient experiential, work based learning opportunities to satisfy the requirements for Professional Registration as Engineering Technician (EngTech) as defined by the UK Standard for Professional Engineering Competence (UK-SPEC).

Level

This Standard is at Level 3 of the Qualifications and Credit Framework (QCF).

Standard Review date

This Standard is due for review in March 2017.

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