ST1406 | Science Manufacturing Technician 2023

General Overview

- ✓ Typical on-programme learning: 36 months
- ✓ EPA duration: 3 months
- ✓ Maximum funding: £22,000
- ✓ Level 3

Science manufacturing technicians are found in the process manufacturing sector.

This is a core and options apprenticeship. An apprentice must complete the core and one option relevant to their occupation. The options are:

- Option 1. Biotechnology manufacturing technician
- Option 2. Aseptic pharmaceuticals manufacturing technician

Biotechnology manufacturing technicians produce biological products such as proteins, antibodies, and DNA. These may be used in pharmaceuticals, agricultural products, food and feed, detergents, paper, textiles, and biofuels. The final product may be solid or liquid and may be filled into small volume bottles or large bulk containers. Typically, batch processing is used. They may work in a controlled environment, such as laboratory or clean room, or production facilities. Biotechnology has an important role to play in helping to address many global problems, such as climate change. For example, synthetic biology is already contributing to the development of many biological systems producing drugs, chemicals, and fuels without using fossil fuels.

Aseptic pharmaceuticals manufacturing technicians are involved in the manufacture of pharmaceutical products - medicines or drugs. They may be involved in part or all of the process including active pharmaceutical ingredients (API) production and final formulation. APIs are the medical ingredient that goes into medicines. Formulations typically involves the blending of the API and other ingredients. Production may be continuous or batch. Technicians work in highly controlled process areas. This could be in large process plant or small rooms depending on the type of medicine being made and the stage of the process. Typically, they will work in a clean room where air particulates are controlled to stop potential contamination of the product.

Both biotechnology and aseptic pharmaceuticals manufacturing technicians run and maintain the process or processes in line with operational parameters. They conduct quality assurance, resolving or escalating any issues, and complete records. Maintaining workplace safety by following health, safety and environmental risk and management systems is a vital part of the role. They also take part in risk assessment and improvement activities, and support audits.

On a daily basis, they work with other members of the process team. They also have contact with people in other teams for example, laboratory, maintenance, process engineering, supply chain, and warehouse. They may also have contact with external people such as, customers, service providers, and regulators.

They must ensure that the process and products meet quality specifications and are produced to schedule. They must work to external manufacturing regulations to protect the process, product, plant and equipment, company employees, and the environment. They must also consider sustainability. They may need to wear specialist PPE to protect the product or themselves. This may include, safety glasses, chemical resistant gloves, suits and footwear, and breathing apparatus. They may work alone or part of a team. They work with minimal supervision, taking responsibility for the quality and accuracy of their work.

Entry Requirements

Employers will set their own entry requirements. Typically, they require applicants to have GCSE science grade C or 4. An employer may require applicants to have a health screening to ensure suitability for working in some work environments.

On-Programme Competence Evaluation

The apprentice will complete on and off-the-job training, developing their knowledge, skills & behaviours as stipulated within the apprenticeship standard.

Gateway Requirements

The employer, supported by the training provider must confirm that the apprentice is ready for EPA, before the EPA process can begin.

The employer, supported by the training provider must sign a declaration to agree the apprentice has met the required criteria as set out in the Science Manufacturing Technician 2023 standard.

As part of the SIAS EPA service, we will check that all gateway evidence has been met before we begin the process of EPA.

End Point Assessment (EPA)

The assessment plan defines the following methods of assessment for the Science Manufacturing Technician standard.

1 Observation with Questions

- The purpose of the Observation is to validate the apprentices' competence by observing them carrying out their job role in a normal working environment under normal conditions.
- The purpose of the questioning is to assess underpinning knowledge and behaviours with a minimum of 5 open questions. Questions must be asked after the observation is complete.
- Duration: 3 hours.

2 Interview Underpinned by a Portfolio of Evidence

- The purpose of this assessment is it allows the apprentice to be assessed against KSBs mapped to this assessment method.
- It is supported by a portfolio of evidence, enabling the apprentice to demonstrate the application of skills and behaviours as well as knowledge.
- A minimum of 8 questions.
- Duration 1 hour.

3 Multiple-Choice Test

- The purpose of this assessment is it allows for the efficient testing of knowledge.
- 40 Questions.
- Duration: 1 hour.

Assessment Marking & Grading

Results for each individual assessment method will be available within 15 working days from the assessment date.

The SIAS End Point Assessor, will combine the results of each individual assessment method and provide an overall assessment grade of Fail, Pass, Merit or Distinction.

Apprenticeship Certification

Your apprentice will receive a Certificate of Apprenticeship on successful completion of all individual assessment methods.

Guidance & Support

SIAS provide a range of resources which offer EPA guidance and support for the apprentice, the employer, and the college/training provider.

We aim to help employers and colleges/training providers to support the on-going competence evaluation of the apprentices' knowledge, skills, and behaviour to ensure that your apprentice is confident for their EPA. All of our resources are comprehensively mapped to this apprenticeship standard.