

Level 3 Machining Technician (ST1305)

Product Information Sheet

Typical Duration to Gateway: 42 Months

Funding: £27,000

<https://www.instituteforapprenticeships.org/apprenticeship-standards/machining-technician-v1-2>

- EAL Level 3 Extended Diploma in Machining (Development Knowledge).

Overview of the Role

Setting up machines prior to production as well as monitoring and correcting them as needed.

Occupation Summary

This occupation is found in the Advanced Manufacturing and Engineering (AME) sector. AME includes Aerospace, Automotive, Maritime Defence, Nuclear and Construction sectors. Machining technicians produce complex and precision machined products that are typically used in machinery. For example, aeroplanes and vehicles. They can also produce bespoke components or products for domestic appliances or medical equipment. They use a variety of machines to carry out their work. For example, centre lathes, vertical and horizontal milling machines, horizontal and cylindrical grinding machines. Electro discharge machines, single and multi-axis Computer Numeric Control (CNC) machine tools centres. Gear cutting and Gear Grinding machines.

The broad purpose of the occupation is to produce complex and precision work by machining components. Components are machined from metal or specialist materials using conventional or CNC machine tools. Machining Technicians interpret information and plan their activities. They also set up, operate, adjust, or edit machine tool settings. When using CNC equipment, they can produce, prove, or edit programmes. They inspect components and machinery, report issues and support continuous improvement activities. They typically work in a manufacturing environment. Depending on the organisation, they may be required to work at height or work shifts.

In their daily work, an employee in this occupation interacts with other Machining Technicians. They also interact with various stakeholders. They typically report

to an Engineering or Manufacturing Team Leader. Typically, this would be as part of a defined or cross functional team. They may also interact with customers, suppliers, colleagues, quality auditors and regulators.

An employee in this occupation will be responsible for the quality and accuracy of their work. They also must work efficiently and be productive in the work they undertake. They must work both individually and as part of a larger team. They must work within the relevant health, safety, and environmental regulations. This includes the use of appropriate protective clothing and equipment. They are responsible for the correct use and housekeeping of machinery, tools, and equipment. All work must be completed in a safe and efficient manner as directed by supervisory staff.

NOTE: Please refer to the link above for Knowledge, Skills, Behaviours and duty requirements.

Typical Job Roles Include:

- Centre Lathe Turner
- CNC Centre Lathe Turner
- CNC EDM Machinist Technician
- CNC Gear Cutter
- CNC Gear Cutter and Grinder
- CNC Horizontal Borer
- CNC Machinist
- CNC Machinist (Miller Turner or Grinder)
- CNC Machinist Programmer
- CNC Vertical Borer
- Conventional Vertical Borer
- EDM Machinist Technician
- Gear Cutter
- Gear Cutter and Grinder
- Horizontal Borer
- Machining Technician Machinist
- Manual Machinist (Miller Turner or Grinder)
- Precision Engineer

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Professional Recognition

This standard aligns with the following professional recognition:

- Royal Aeronautical Society (RAeS) for Engineering Technician (EngTech)
- Institution of Engineering and Technology (IET) for Engineering Technician (EngTech)
- Institute of Mechanical Engineers (IMechE) for Engineering Technician (EngTech)

End Point Assessment (EPA)

Consists of 3 assessment methods:

Assessment Method 1

Practical demonstration with questions: Graded Fail or Pass.

Assessment Method 2

Interview underpinned by a portfolio of evidence: Graded Fail, Pass or Distinction.

Assessment Method 3

Knowledge test: Graded Fail, Pass or Distinction.

Overall EPA and Apprenticeship can be graded Fail, Pass, Merit or Distinction.

On Programme Requirements

12 weekly progress and behavioural reviews.