

# MACHINING TECHNICIAN



Machining Technician 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.

**Course code**  
AS3 Mach Tech

**Award on successful completion**  
Machining Technician level 3 standard

**Study type**  
Day Release

**Level**  
3

**Start date**  
TBC

**Duration**  
42 months

**Fees**  
£27,000. Funded by government 16-21, 22+ 5% employer contribution

**Location**  
TBC

## Course Overview

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.

## Entry requirements

Individual employers will set the recruitment and selection criteria for their Apprenticeships. In order to optimise success, candidates will typically have 4 GCSEs at Grade C/4 or equivalent, including Mathematics, English and a Science.

## Modules

- Health and Safety in the Engineering Workplace
- Communications for Engineering Technicians
- Mathematics for Engineering Technicians
- Engineering Project
- and 4 more optional units.

## Methods of assessment

Progress and development will be assessed at regular stages - this is likely to be a combination of assignments, activities, exams, reflective discussions and observations in the workplace.

The employer and training provider will formally sign-off the apprentice's readiness for the independent End Point Assessment (EPA) at 'gateway'. Gateway is the point at which the apprentice has met and can confidently apply the minimum knowledge, skills and behaviours required, as detailed within the apprenticeship standard.

The End-Point Assessment (EPA) will consist of:

- Online knowledge test
- Practical Observation
- Professional interview

Performance in the EPA will determine the overall apprenticeship grade i.e. pass or distinction.

## Typical Job Roles

- Centre lathe turner
- Cnc 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

## What can I do next?

Continue to develop and work in the industry.

Progress onto a Level 4 Engineering Apprenticeship.