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Apprenticeships



APPRENTICESHIPS

MACHINING TECHNICIAN APPRENTICESHIP

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

LEVEL	This apprenticeship standard is set at level Three
ENTRY REQUIREMENTS	Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and Maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.
DURATION	Typically 42 months (not including EPA period)
START DATES	September
LOCATION	Reading

OVERVIEW

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.

JOB ROLES

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.

OCCUPATION DUTIES

- Conduct safety checks and performance monitoring for machining, associated equipment and surrounding work area.
- Receive, read and interpret engineering data and documentation, engineering drawings and technical data. Contribute to or plan the days machining schedule.
- Check and inspect materials to be machined to ensure that they conform to quality standards. Identify and report any issues or faults such as incorrect grades, dimensions and thicknesses.
- Plan and prepare sequence for the machining activities. Ensure that the correct tooling, work holding, and materials are used. This applies to conventional complex or CNC complex machining tasks.
- Set up, operate, adjust or edit conventional or CNC machining equipment settings and programmes for the machine tool being used.
- Machine high-quality complex components using a broad range of processes. For example, internal or external thread cutting, slots and pockets, internal or external under cutting. Also profile forms, tapered and eccentric diameters, bored holes, and tee slots.
- Inspect components produced. Adjust the machining equipment or programme and tooling to ensure components meet quality requirements.
- Identify, communicate and report issues affecting machining component quality, quantity and deadlines.
- Complete machining documentation at all stages of the work activity. For example, standard operational procedures, control documentation and contribution to audits.

- Maintain and restore the machining work area, performing housekeeping and waste management as appropriate. Ensure tools, unused materials and equipment are returned to a safe, clean and approved condition on completion of machining work.
- Keep stakeholders for example, customers, colleagues and line managers informed about machining work.
- Perform scheduled daily inspection and machine shut down or safe isolation.
- Support continuous improvement activity to address business problems.

CURRICULUM DELIVERY

The apprentice will meet the assessor in their workplace to support with the delivery of standards, to review and record the progress, and coach throughout the apprenticeship. Additional sessions may be required to support with Functional Skills, Maths and English, and this can be delivered during one-to-one sessions as well as college classes depending on the learners needs. It is essential that employers also ensure that apprentices are being mentored in these practices whilst in the workplace to ensure a satisfactory level of competence and knowledge is achieved prior to End Point Assessment (EPA).

APPRENTICESHIP WAGES

Every apprentice must be paid a lawful wage for the time they are in work and in off the-job training. The employer must meet the cost of the apprentice's wages. An employer can only pay the apprenticeship minimum wage from the start of the apprenticeship programme and not before. You can find information on the national minimum wage, the apprenticeship rate, and the definition of an employee on GOV.UK.

END POINT ASSESSMENT

To achieve this apprenticeship standard, the employer, training provider and apprentice will agree when the apprentice has developed all the knowledge, skills and behaviours defined in the apprenticeship standard and clearly evidenced by the on-programme progression review meetings and records. The independent end assessment ensures that all apprentices consistently achieve the industry set professional standard and can commence at any point once the apprentice is competent after the twelve-month minimum period of learning and development. Prior to independent end assessment, the functional skills English and maths components of the apprenticeship must be successfully completed.

PROGRESSION

Successful completion of this apprenticeship can lead on to work as an Engineering manufacturing technician.

For more information please contact us:

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