

MACHINING TECHNICIAN APPRENTICESHIP LEVEL 3



For new or existing staff

The apprenticeship is aimed at new or existing employees who want to gain Machining skills and qualifications. 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.

Qualification

EAL L3 Extended diploma
in Machining (Development
Knowledge)

Completers may want to progress to
HNC or higher level apprenticeships

Delivery model and duration:

Apprentices will attend college for two days per week over two years. This may be revised in Year 2.

Training, assessments and observations will also be completed in the workplace

Duration: 42 months plus 6 months End Point Assessment

Ideal for:

- Machinist
- CNC Machinist
- Programmer/Machinist
- CNC Setter/Machinis

The apprenticeship will cover the following core areas:

- Understanding mathematical techniques, formula and calculation involved in the machining processes such as speeds and feeds, calculating angles/tapers, material removal
- Understanding the workholding devices, cutting tools, and setting up procedures, in adequate depth to provide a sound basis for carrying out the activities, correcting faults and ensuring the work output is to the required specification
- Producing complex and specialist components as a one-off test and trial work piece and/or producing components in small or large batches
- Contributing to the business by identifying possible opportunities for improving working practices, processes and/or procedures

Entry Criteria:

- GCSEs in English, maths and science at grade 9-4 or A*-C

Benefits to business:

- Increase future productivity
- Keep the business up to date with the latest knowledge and innovative practice
- Deliver on the job training to employees tailored to business needs
- Develop and retain existing staff by offering support and a fresh perspective

Benefits for learners:

- Gain high level technical knowledge and practical experience by combining on the job training with academic study
- Gain a valuable, national-recognised qualification
- Fill skills gaps in businesses

0345 155 2020

employer.training@gloscol.ac.uk



gloscol.ac.uk/apprenticeships

GC
Gloucestershire College

MACHINING TECHNICIAN APPRENTICESHIP LEVEL 3

End Point Assessment

The End Point Assessment will test the entire Standard, and will have the following components:

- An occupational Competence Validation Interview (Viva) drawing from a portfolio of evidence of occupational competence
- Professional competence assessment (observation) undertaken by independent assessor(s) Professional Review (supported by a portfolio of evidence)
- An online exam testing knowledge

Components

- EAL L3 Extended diploma in Machining (Development Knowledge)
- Portfolio of evidence showing how the required knowledge skills and behaviours required by the standard have been achieved

Apprentices on this Standard are expected to carry out the following 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