

Apprenticeship standard (England only)




# Engineering Technician (Machinist – Advanced Manufacturing Engineering)

Industry: Engineering

City & Guilds code: 1271-02, 1271-03,  
1272-02 and 1272-03

LARS number: 167



-  **Minimum duration: 42-48 months**
-  **Funding band: 15 (£27,000)\***
-  **Level 2 and 3**

\*Funding bands from May 2017

**On-programme learning:** Available

**End-point assessment (EPA):** Must be carried out by a professional engineering institution or military independent assessment authority

Machinists manufacture products using specialist tools and high-quality materials. They operate various machinery and will be expected to amend the equipment and ensure products are produced according to requirements. They also have a good understanding of mathematical procedures and can understand information on production. Roles include: manufacturing engineer, production engineer.

The apprentice will typically have four GCSEs or equivalent at grade C or above, including English, maths and science.

The Department for Business, Energy & Industrial Strategy (BEIS) approved the this pathway in March 2017 and it's included in the Engineering Technician Standard. It directly replaces the mechanical manufacturing engineering SASE framework (1712).

## City & Guilds – helping you with an expert solution

There are four stages where we can work together to help your apprentices from the start through to successful completion of their training.



### Plan

Helping you plan and prepare for the new standards with a bespoke solution to make the most of your investment in apprentices.



### Attract

Simple online vacancy and candidate set up, TalentPortal can connect you to the talent you need to fill your apprenticeship vacancies.



### Deliver

High-quality, online and offline content to help draw out the skills, knowledge and behaviours to prepare apprentices for end-point assessment as well as tracking options to monitor performance.



### Assess

Support for you and your apprentices to prepare for end-point assessment by our first-rate, fully trained assessors. Our simple, flexible service meets the demands of your team and your partners.

## The apprentice journey



### 1 On-programme (deliver)

Training and development takes place during this part of the apprenticeship. It may include a qualification if set in the standard.

Formative assessment of skills, knowledge and behaviours is required in the delivery of the standard and this will be outlined in the assessment plan.

Apprentices have to reach a minimum level of maths and English set by the standard. If they've not previously achieved this, they'll need further study and support.

## 1 On-programme: what apprentices need to learn

On-programme is the learning phase for apprentices to pick up the skills, knowledge and behaviours set in each standard. Apprentices need to complete 20% off-the-job training during the on-programme phase of their apprenticeship. Specific rules govern this and it must take place in the apprentice's contracted hours. You can track and authorise the 20% through our e-portfolio, Learning Assistant.

There are mandatory on-programme qualifications that reflect the foundation stage and development stage of this on-programme. There are two qualifications that have to be achieved by the end of each stage:

1271-02 Level 2 Diploma in Advanced Manufacturing Engineering (Foundation Competence)

1272-02 Level 2 Diploma in Machining (Foundation Knowledge)

1271-03 Level 3 Diploma in Advanced Manufacturing Engineering (Development Competence) – Machining

1272-03 Level 3 Diploma in Machining (Development Knowledge)

## Our resources and tools that support on-programme delivery

Our core content for this standard covers Prevent, British values, equality and diversity, and health and safety which gives you the basics to deliver the standard and satisfy regulators. It's a blend of e-learning and downloadable content.

We also have:



### Mandatory qualifications

Designed to meet the requirements for on-programme to help make sure that apprentices are fully prepared for EPA. The mandatory units align closely to the standard and enhance the on-programme learning for the apprentice and employer. Each qualification has a core and options approach and employers will select the pathway and unit options that meet their organisational requirements.

See more at [cityandguilds.com](https://www.cityandguilds.com) (search **1271-02, 1271-03, 1272-02 and 1272-03**)



### Learning Assistant

Innovative and cost effective e-portfolio solution that lets you dramatically improve the delivery of their apprenticeship standards by tracking apprentices' progress online in real time. And helps authorise and evidences 20% off-the-job learning.



### Guidance documents

- Handbook containing the knowledge qualifications.
- Sample assessment materials

## Maths and English requirements

If your apprentices need to complete maths and English, our popular Functional Skills qualifications fit within apprenticeship programmes and cover the core maths and English requirement for the workplace and further study. We have an extensive support package available, including e-Functional Skills, and an online teaching and learning platform, which guides learners from an initial and a diagnostic assessment, through to being exam ready.

Find out more: [cityandguilds.com/functionalskills](https://www.cityandguilds.com/functionalskills)



## 2 Gateway

The employer and provider must sign off the apprentice as ready to move on to end-point assessment.



## 3 Assess

The end-point assessment must demonstrate that the apprentice can perform in the occupation in a fully competent, holistic and productive way.

The assessment will be graded if required by the standard.

The assessment organisation and assessor must be independent of, and separate from, the training provided by the provider and employer.



## 4 Apprenticeship certificate

On successful completion, the end-point assessment organisation will apply to the Education and Skills Funding Agency (ESFA) for the apprenticeship certificate. The certificate is sent to the apprentice's employer.

## 2 Gateway

To move on to EPA, the apprentice must pass two gateway reviews, both done by the employer.

The first review is after the foundation stage and must be passed to progress onto the development stage. The apprentice must show they've achieved the Level 2 foundation competence qualification as well as the Level 2 foundation knowledge qualification and/or satisfactory achievement/progress towards year 1 Level 3 technical knowledge units relevant to the occupational pathway. They must also show satisfactory progress towards the employer-required behaviours.

At the second review, the apprentice must have achieved the Level 3 technical competence and knowledge qualifications; the behaviours aligned to engineering technician or military professional competence; and English and maths qualifications at Level 2.

## 3 End-point assessment (EPA): how apprentices demonstrate their learning

EPA is the final stage that an apprentice goes through to complete their apprenticeship. The apprentice must demonstrate their learning to an independent end-point assessor and the overall grade available is pass or fail.

The standard sets out that the EPA must be carried out by an employer-nominated professional engineering institution (PEI) or military independent assessment authority (MIAA). Assessment events are:



### Occupational competence validation interview

A portfolio-based occupational competence validation interview – a viva – with the employer. Graded pass or fail.



### Assessment of professional or military competence

An independent assessment by a PEI or MIAA to determine if the apprentice has met the engineering technician requirements defined by the UK-SPEC or relevant military professional competence requirements. Graded pass or fail.

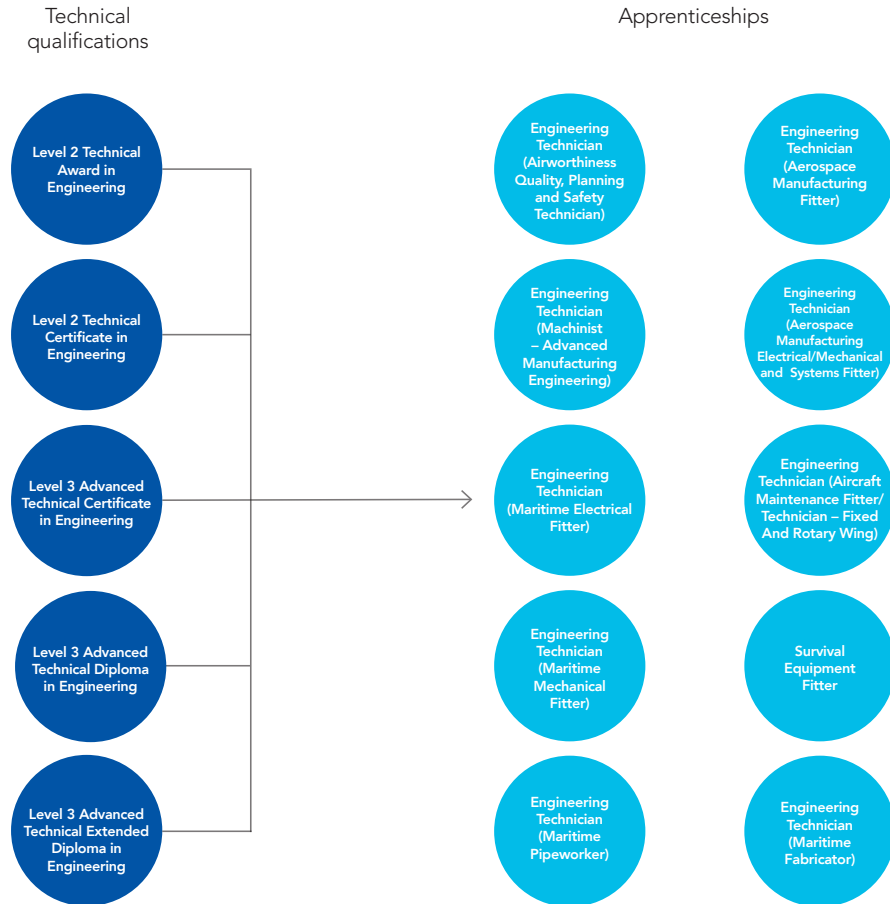


## 4 Apprenticeship certification

The PEI/MIAA will apply for the apprenticeship certificate from the Institute for Apprenticeships (IfA). It must have quality assured the employer portfolio-based occupational competence viva interview document signed by the employer and confirmed that the apprentice has achieved the correct mandatory qualifications. They will confirm that the apprentice has met the criteria for Engineering Technician/MPC and has received a final overall apprentice sign-off from the employer.

## Progression with City & Guilds Group

This apprenticeship is part of our wider offering in the sector and you can develop new and existing talent with ILM management apprenticeships including: Team Leader/ Supervisor Level 3; Operations/Departmental Manager Level 5; Chartered Manager Degree Level 6 and the Senior Leader Master's Degree Level 7.



The apprenticeship aligns with the recognised generic professional institution standard for engineering technicians. It gives apprentices the chance for continued professional development in the future. In the case of the military, it aligns with trade-specific military professional competence requirements.

Developed with an employer group including: BAE Systems, Airbus Group, The Institution of Engineering and Technology, British Airways, Rolls-Royce, Royal Aeronautical Society, Royal Air Force Cosford, Royal Navy, Institution of Mechanical Engineers, Siemens, Jaguar Land Rover, BMW, Toyota UK and Babcock International Ltd.

## How our offer supports you:

### Supportive payment structure

When you choose us for EPA you pay a small registration fee and the balance once the EPA has taken place and results submitted.

### Personal support

Our Technical Advisors, Business Managers and Customer Service teams are on hand to help you with all aspects of apprenticeships.

### Specialist online tools

Our e-Functional Skills can boost maths and English; Skills Zone develops workplace behaviours and skills; and our e-portfolio, Learning Assistant, lets you manage assignments and track the 20% off-the-job training requirement.

### Events and webinars

We deliver a range of events and webinars run by industry specialists to advise and guide you, including regional networking and CPD events.



### More information

If you're a City & Guilds centre, visit Walled Garden or contact your Business Manager to find out prices and if any elements are extra to the package. If you're a new customer, contact [apprenticeships@cityandguilds.com](mailto:apprenticeships@cityandguilds.com) to find out more.

Or visit [cityandguilds.com/apprenticeships](http://cityandguilds.com/apprenticeships) for full information on our apprenticeship products and services. Visit [i-l-m.com/apprentice](http://i-l-m.com/apprentice) for information on management apprenticeships.