



# Level 2 Engineering Technician Programme (ETP)

## Post 16 2020

This qualification covers specific skills, knowledge and behaviours of a range of engineering disciplines which have been developed in consultation with engineering industry specialists and training providers to ensure that it meets the needs of employers and learners and covers a range of Apprenticeship Standards developed across the advanced manufacturing and engineering sector.

The awarding body for this course is EAL, a specialist awarding organisation for industry. This course is verified by HyDRAM, a leading engineering manufacturer of sheet metal products and one of our employer partners. HyDRAM verify all of the students work to guarantee that it meets both EAL and industry standards for quality.

This course fits the new Apprenticeship Standards and successful students pass through the Level 2 Gateway.

The qualification is achieved when all the necessary units have been completed. The learners will also receive a certificate of unit credit, listing all the units they have achieved.

This qualification is not graded; learners can achieve a pass or be refer only. To achieve a pass, learners must be able to demonstrated their performance, skills, knowledge and behaviours across all units.

The course will enable learners to:

- Learn practical skills and gain a relevant industry standard qualification
- Access workplace experience with companies in the form of site visits
- Experience development sessions and careers advice as part of our wider 6<sup>th</sup> form offer
- Re-sit English and/or Maths GCSEs (where needed) taught by specialist GCSE teachers

## Course Structure

Recent changes in the structure of apprenticeships, moving from frameworks to standards, mean that the one year PEO course that UTC students have studied previously has been replaced with the Level 2 Engineering Technician Programme.

Due to the additional 4 foundation competency units and 7 foundation knowledge units, plus the restrictions put onto the education system following the Covid-19 outbreak, we will now deliver this course over 2 years. This will then become a 25 hour qualification, with students encouraged to seek work experience (if possible) one day per week to further enhance their portfolio for when applying for apprenticeships.

14 hours of timetabled lessons are taught by specialist staff, all with teaching and industry experience in their relevant field of expertise. Additional self-directed study will be spent writing up the practical activities being working on, or sitting additional GCSE Maths and English lessons (if required).

All learners will cover the fundamental skills, knowledge and behaviours common to all engineering practices (the mandatory units). They will then study assessment units in both Mechanical Engineering and Fabrication and Welding industry sectors.

Learners will study **10 foundation competency units** (Diploma in Advanced Manufacturing). These units are practical based assessments, taught in the Engineering Hall or a CAD room.

The 4 mandatory competency units are:

- Safe working practices.
- Carrying out engineering activities.

- Communicating technical information.
- Conducting business improvement activities.

The 6 additional units are in the following practices:

- Producing components using bench fitting techniques.
- Preparing and using lathes for turning operations.
- Producing sheet metal components and assemblies (<3mm).
- Preparing and using manual TIG or MIG welding equipment.
- Producing engineering drawings.
- Preparing and using CNC machines (choice of CNC turning or CNC fabrication for this unit).

### **EAL Level 2 Diploma in Advanced Manufacturing Engineering (Foundation Competence) 601/7179/0**

<https://eal.org.uk/record/2628-diploma-in-advanced-manufacturing-engineering-foundation-competence>

Learners will also study 7 **foundation knowledge units** (Diploma in Machining). 5 mandatory and 2 chosen. These are theory units that will be covered in a classroom, CAD room or in the Engineering Hall, depending on the content.

The 5 mandatory knowledge units are:

- Working in an engineering environment.
- Engineering mathematical and scientific principles.
- Engineering techniques.
- Business improvement techniques.
- \*Fitting and assembly techniques.

The 2 chosen knowledge units are in the following practices:

- \*Computer aided Drawing – CAD.
- Principles of CNC machining/fabrication.

### **EAL Level 2 Diploma in Machining (Foundation Knowledge) 601/9034/6**

<https://eal.org.uk/record/2607-machining-foundation-knowledge>

## Assessment

All 10 **foundation competency units (601/7179/0)** are assessed against set criteria. Assessment involves practical work, a written portfolio of evidence (produced by the learner), witness testimonies and verbal questioning to measure knowledge and understanding of key principles. There are also 10 written assessments (linked to each foundation competency unit) that need to be passed by each student. These documents contain a number of questions based on the practical activities that make up each practical unit.

The 7 **foundation knowledge units (601/9034/6)** are assessed through online multiple choice assessments, taken at the end of each unit. Some units (\*) also have practical assessments to complete. To be successful, learners must achieve a minimum of 60% in each of the foundation knowledge assessments, plus pass any practical assessment that stands beside it.

## Progression

Completion of the Level 2 Engineering Technician Standard qualification can lead onto Level 3 engineering related qualifications (at UTC or other providers) or a Level 3 engineering apprenticeship (providing all 17 units are successfully completed). Many engineering companies who take on apprentices (at 16 -18) would have them complete a Level 2 Engineering Technician Standard in the first year of a 4-year apprenticeship. By completing this course, students could find themselves going for apprenticeship interviews having already completed an integral part of the standards, making their application much stronger.

## Entry Requirements

The entry requirements for this course are as follows:

- The normal requirement for the course is Grade 3 or better in GCSE English and Maths – this is to allow you to access the theoretical side of the course and be successful in the written assignments. However, we will discuss your grades when we meet you in the summer and may allow enrolment with reduced grades for this year.
- A good attitude as seen from a recent school report.
- A successful 1:1 meeting, taster day and induction period.

## Expectations

The following expectations are fundamental to the success of any student enrolling on this course –

- A minimum of 95% attendance to taught lessons (not including authorised absence).
- A good record for punctuality.
- A good attitude to work, peers and staff.
- Keeping up to date with all work set.
- Being proactive to seek advice and guidance if you are struggling with any aspect of the course.

There will be a probationary period of 6 weeks for all students, after which your attitude to continue the course will be assessed.

For students who are not keeping up with the pace of the full two year programme, it is possible to complete a single year of the course and achieve the Level 1 PEO qualification with certificates. We will discuss this option with you as the course progresses.

## English and Maths Re-sits

It is possible to re-sit GCSE English and/or Maths if you are required to do so. These timetabled lessons would be with GCSE specialist teachers and would be taken away from independent study time spent on engineering work.

UTC web link to course - <https://www.utcsouthdurham.org/utc-life/curriculum/years-12-and-13/level-2-performing-engineering-operations>

EAL Website - <https://eal.org.uk/about-eal/eal-awards>

Hydram Website - <https://www.hydrum.co.uk/>

