

## Engineering Technician Toolmaker and Tool & Die Maintenance Technician

## Level 3 Apprenticeship

Toolmakers and Tool & Die Maintenance Technicians are predominantly involved in the highly skilled, complex and specialist detailed work of manufacturing and maintaining the engineering tooling used to produce components, products and assemblies. These products, assemblies and systems affect all of our daily lives, whether it be for travel such as (cars, planes, boats and rail) energy, defence, food, clothing, packaging and health including medical equipment, devices and implants such as joint replacements.

## Apprenticeships



#### **Duration:**

Up to 4 years

Year 1 - full time at Training 2000

OR x6 four week blocks and 1 day per week to complete the Technical Certificate (if required)

Year 2 - 1 day per week to complete the Technical Certificate (if required) / assessment in the workplace

Year 3/4 - assessment in the workplace

Where will I study: Training 2000, Blackburn

#### **Entry requirements:**

A minimum of four GCSEs at grade 4 (C) or above including English, Maths, Science and Technology is desirable. Other equivalent qualifications are acceptable

\*Year 1 full time at Training 2000 could be for a minimum of 6 months to a maximum of 12 months. Year 1 blocks could take between 12 and 18 months to complete. Full time or block training to be decided by employer.

## What you'll learn

#### **Mathematical techniques**

Mathematical techniques, formula and calculations in a Toolmaking environment

#### **Characteristics of common materials**

The structure, properties and characteristics of common materials used for the manufacture and repair of tooling, moulds, dies and jigs and fixtures

#### Hand tools

The safe operation, correct selection and the application of a range of hand tools used for toolmaking and die maintenance, including grinders, drills, stones etc.

#### Workshop machinery

The safe operation and operating principles of a range of complex and often state of the art workshop machinery (such as CNC lathes, milling, grinding and erosion machining centres, drilling and welding equipment)

#### Set up and operate machinery

How to set up and operate the machinery/equipment efficiently and effectively

#### Individual components/systems

The principles of how the relevant tools, dies, jigs and fixtures being manufactured/maintained function, the operating sequences, the purpose of individual components/systems and how they interact

#### **Application of systems**

Understand the application of pneumatics, hydraulics, electrical and electronic systems as applied to various moulding, injection, pressing and similar associated machinery.

#### Data and documentation

Read and interpret relevant data and documentation used to produce and/or maintain tool and die components, assemblies and systems

#### Produce, assemble, disassemble repair and maintain tools

Apply methods and techniques to produce, assemble, disassemble repair and/or maintain tools, dies, jigs and fixtures as applicable to the employer requirements

#### Manufacture components

Manufacture components (such as tooling, dies, jigs and fixtures)

#### Testing

Undertake testing to confirm correct operation, and of the effectiveness of repairs and maintenance activities carried out.

#### Preventative planned maintenance

Undertake equipment/asset care and/or preventative planned maintenance processes and procedures

#### Fault diagnosis and repair activities

Carry out complex fault diagnosis and repair activities covering the following technologies as applicable to the tool, die, jig and fixture environment:

- Maintaining mechanical equipment
- Maintaining fluid & pneumatic power equipment
- Maintaining electrical & electronic equipment
- Maintaining process control equipment

#### **Continuous improvement**

Contribute to the business by identifying possible opportunities for improving working practices, processes and/or procedures

### How you'll be assessed?

At the end of your Apprenticeship you'll go through an end-point assessment (EPA) and be graded a fail, pass or distinction based on a:

1. Interview based on a portfolio of evidence

2. Professional recognition application

The Institution of Engineering and Technology

Accredited Scheme

Successful completion of

this Apprenticeship provides

you with professional status (EngTech) which will be

customers and your wider professional network.

understood and sought after by

your peers, employers, suppliers,

#### Your Apprenticeship career path

Below is an example career path showing how you can earn, learn and study up to Degree level with an Apprenticeship. Training 2000 are part of the University of Central Lancashire which makes it easier than ever to progress on to a Degree Apprenticeship or Degree.



An Apprenticeship in Engineering can take you in many directions from an Aerospace Engineer to Nuclear engineer. You could even go on to own your own business.

# Interested? Apprenticeships start throughout the year. Apply now!

www.training2000.co.uk 01254 54659 info@t2000.co.uk

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