

## ENGINEERING TECHNICIAN

# TOOLMAKER AND TOOL & DIE MAINTENANCE TECHNICIAN APPRENTICESHIP- LEVEL 3

### WHY YOU?

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. This requires the application of a broad range of activities including the interpretation of Engineering drawings and technical instructions and the use of hand, machine and automated computer controlled machine tools and measuring equipment.

### 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 your workplace

Year 3 - assessment in your workplace

### TRAINING LOCATION: 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.

**JOB ROLES INCLUDE:** Toolmaker (Manufacture), Toolmaker (Research and Development), Tool & Die Maintenance Technician

### OUR OFFER INCLUDES:

- Training 2000 registration and pass
- Structured delivery programme
- Assessor visits and reviews in your workplace
- Synoptic / end point assessment
- Accredited Health and Safety training
- Awareness training on drugs, financial and driver awareness

Successful completion of this Apprenticeship provides you with

professional status (EngTech) which will be understood and sought after by your peers, employers, suppliers, customers and your wider professional network.



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## COURSE DETAILS

Technicians must comply with applicable legislation and organisational safety requirements and be expected to work both individually and as part of a manufacturing team, working with minimum supervision, taking responsibility for the quality and accuracy of the work they undertake. They will be proactive in finding solutions to problems and identifying ways to improve the business

They will be expected to test and adjust the systems they have built or maintained ensuring tooling, jigs, fixtures and assemblies meet the required specification. This requires the application of a broad range of skills, knowledge and occupational behaviours across a range of engineering disciplines.

### SPECIFIC SPECIALIST KNOWLEDGE AND SKILLS

- understand mathematical techniques, formula and calculations in a Toolmaking environment
- understand the structure, properties and characteristics of common materials used for the manufacture and repair of tooling, Moulds, Dies and jigs and fixtures
- understand 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.
- understand 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)
- understand how to set up and operate the machinery/ equipment efficiently and effectively
- understand 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
- Understand the application of pneumatics, hydraulics, electrical and electronic systems as applied to various moulding, injection, pressing and similar associated machinery.
- read and interpret relevant data and documentation used to produce and/or maintain tool and die components, assemblies and systems
- 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 (such as tooling, dies, jigs and fixtures)
- undertake testing to confirm correct operation, and of the effectiveness of repairs and maintenance activities carried out.
- undertake equipment/asset care and/or Preventative Planned Maintenance processes and procedures
- 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
- contribute to the business by identifying possible opportunities for improving working practices, processes and/or procedures

### MANDATORY QUALIFICATIONS

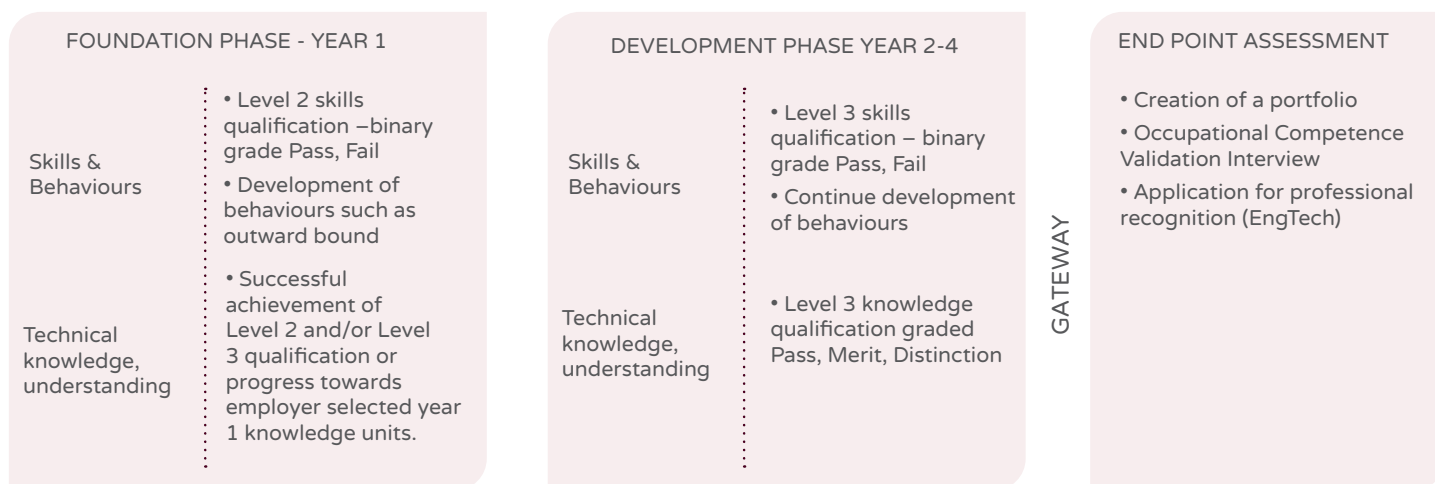
**AFTER A PERIOD OF FOUNDATION SKILLS AND TECHNICAL KNOWLEDGE DEVELOPMENT ALL APPRENTICES WILL BE REQUIRED TO ACHIEVE THE FOLLOWING QUALIFICATIONS**

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

**AFTER A FURTHER PERIOD OF SKILLS AND TECHNICAL KNOWLEDGE DEVELOPMENT ALL APPRENTICES WILL BE REQUIRED TO ACHIEVE THE FOLLOWING QUALIFICATIONS:**

- Level 3 Diploma in Advanced Manufacturing Engineering (Development Competence) – Toolmaker, Tool and Die Maintenance
- Level 3 Diploma or Extended Diploma in Advanced Manufacturing Engineering (Development Knowledge)

### END POINT ASSESSMENT



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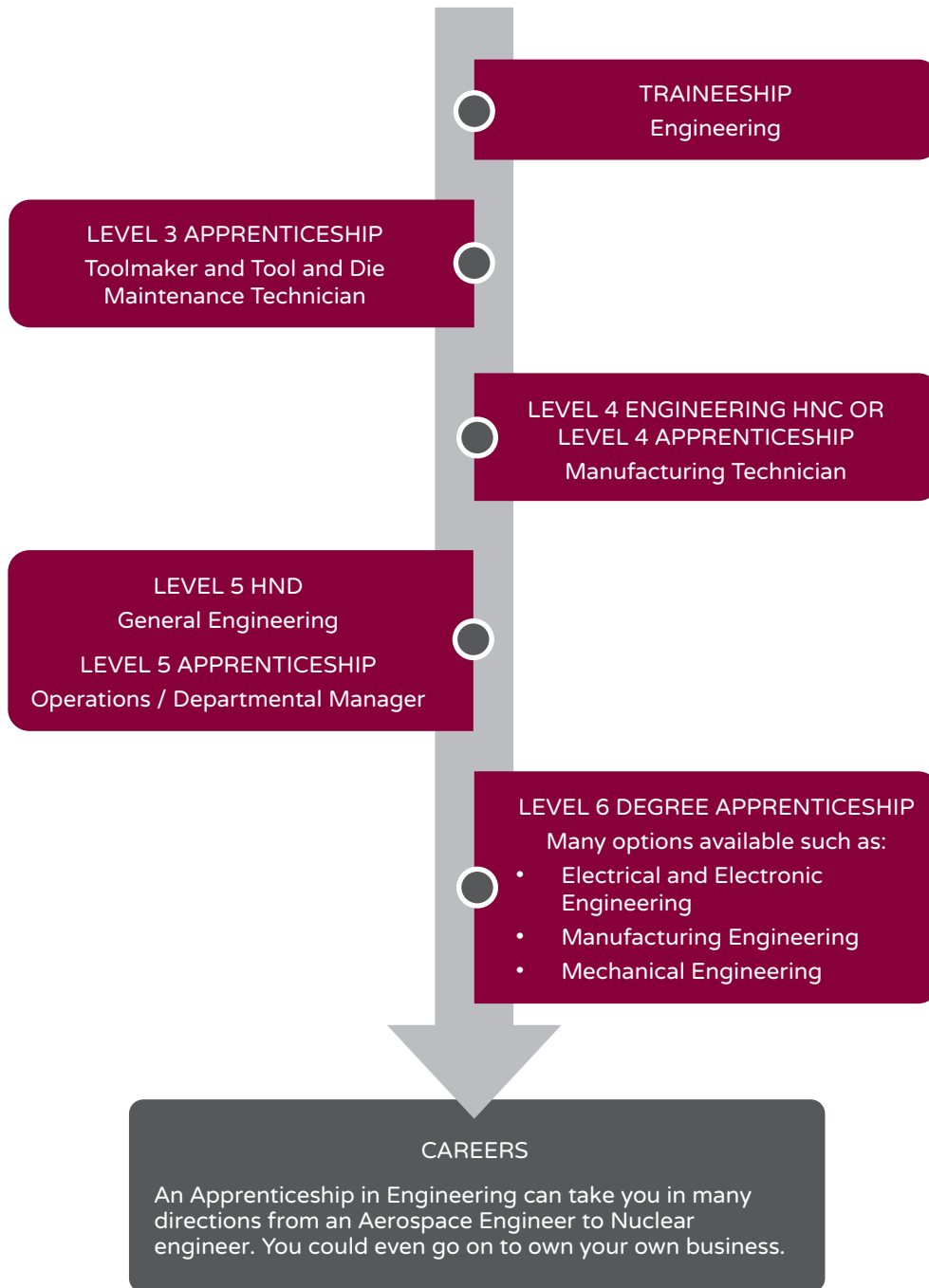


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# YOUR APPRENTICESHIP CAREER PATH

Below is an example career path showing how you can progress up to a Level 6 qualification. At the end of every qualification you have the option to leave your education and progress with your career - you don't need to study up to level 6.



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