



PRODUCT DESIGN AND DEVELOPMENT TECHNICIAN APPRENTICESHIP

**Level:**

3

Duration:

Up to 4 years

Entry requirements:

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

Overview:

Product Design & Development Technicians primarily work on all stages of product creation and modification. They support activities ranging from early concept feasibility, design and development stages right through to final preparation for launch and customers. This includes working in concept studios, rapid prototyping, assembly, testing, validating and analysing performance. Typically they work closely with engineers in bring new concepts to life or supporting redesigns of existing products.





Aim:

- Level 3 Diploma in Advanced Manufacturing Engineering (Development Competence) – Product Design and Development
- Level 3 Diploma or Extended Diploma in Advanced Manufacturing Engineering (Development Knowledge)

Where Can I Study?

Training 2000 Blackburn

Year 1 – full time at Training 2000 OR x6 four week blocks

Year 2 – 1 day per week

Year 3-4 – assessment in your workplace

Any other useful Information:

Specific Specialist Knowledge:

- understand mathematical techniques, formula and calculations in a product design and development environment
- understand material applications and methods of testing (destructive and nondestructive)
- understand Computer Aided Design (CAD) methods and applications
- understand material joining applications and systems
- understand mechanical, electrical, electronic and process control systems
- understand measurement, monitoring, testing and diagnostic methods and techniques

Specific Specialist Skills:

- read and interpret relevant data and documentation used in the design and development of components, assemblies and systems
- produce components and prototypes using a wide range of hand fitting techniques
- produce assemblies and rigs using a range of materials and techniques
- use mechanical, electrical and electronic testing devices and equipment
- produce components and prototypes using a wide range of hand fitting techniques
- prepare and using lathes, milling machines, as well as other general or specialist high technology equipment such as 3D printing/additive manufacturing techniques
- produce assemblies and rigs using a range of materials and techniques
- use a range of mechanical, electrical and electronic testing devices and equipment
- apply mechanical principles and joining techniques to develop products, devices and equipment
- apply electrical and electronic principles to develop products devices and equipment
- identify, diagnose and rectify design problems through the whole creation process including design studio, workshops, test environments or under laboratory conditions
- contribute to the business by identifying possible opportunities for improving working practices, processes and/or procedures

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