

This Apprenticeship is for aspiring engineers who like to work with their hands as well as their heads. The programme teaches traditional engineering skills related specifically to the production of precision machined components and assemblies through the use of high speed machining processes. These include turning, milling and grinding. Apprentices also learn basic bench fitting skills required for finishing and assembling completed products.

Engineers who do this kind of work are normally based in a workshop and machine shop environment but there can also be opportunities to work away from base and even overseas. These skills are fundamental to the production of prototype and batch produced precision components for industrial sectors such as Aerospace, Marine, Automotive and Advanced Manufacturing, all of which offer rewarding careers for high quality, precision-orientated, engineers.

MECHANICAL ENGINEERING

What's involved?

The range of skills Apprentices develop includes:

- Working with high speed precision cutting and profiling machines to produce finished products from basic materials including steel, alloys and non metalics
- Precision measurement using basic, digital and laser technologies
- Introduction to CAD and basic, manually produced, technical drawings
- The use of a wide range of hand and power tools
- Introduction to engineering materials and methods to test materials
- Principles of destructive and non-destructive testing of materials
- Introduction to Computer Numerical Control (CNC) of machines

What qualifications will I achieve?

Apprenticeships are available at **Intermediate, Advanced and Higher Level** and are made up of the following five elements:

- A Competence Element
Such as a Certificate or Diploma at Level 2, 3 or 4
- A Knowledge Element
Underpinning or theoretical knowledge, which will usually require attendance at college
- Functional Skills in English, Mathematics and ICT
At the required level, which will usually require attendance at college
- Personal Learning and Thinking Skills
- Understanding the Employees Rights and Responsibilities through assignment based activities

Progression to Higher National Certificates (HNC) may be an option for progressing your career.

