

# PRACTICAL METALWORKING NATIONAL 4 AND NATIONAL 5

**The aims of this course are to enable learners to develop :**

- skills in using hand tools for bench work
- skills in measuring, marking out and shaping steel and aluminium
- Skills in interpreting working drawings
- Skills in using metalwork machinery
- Skills in forging, heat treatment and fabrication
- safe working practices in workshop environments
- practical creativity and problem-solving skills
- knowledge of sustainability issues in a practical metalworking working context

## **Mandatory Units**

**Practical Metalworking—Bench skills**

Pupils learn to use common hand tools for various tasks such as marking out, fitting and sheet metal work. Pupils will also learn how to read working drawings.

**Practical Metalworking—Machine processes**

Pupils learn to use a range of metalwork machines to produce a range of models. They will become familiar with the centre lathe, pillar drill, angle grinder.....

**Practical Metalworking—Fabrication and thermal joining**

This Unit helps learners develop skills in fabrication, forming and joining of simple metalwork components. Pupils will learn brazing, MIG welding, Manual metal arc welding and spot welding. This unit also covers forging and heat treatment.

**Added value Unit / Course assessment task—making a finished product from metal**

Pupils will employ the skills they have learned throughout the course to manufacture a product. The added value unit is intended to allow pupils to show the breadth and depth of the skills they have developed throughout the year.

## **Final Assessment**

At national 4 level, all units are assessed internally and moderated by the SQA.-

At national 5 level, the course assessment task (practical activity) is internally assessed and moderated by the SQA. This is worth 70% of the available marks. The remaining 30% is assessed by an exam paper set and marked by the SQA.

## **Entry Requirements**

Entry to this course is possible for S5 and S6 pupils who have a keen interest in developing the knowledge and skills described above.

