

# Apprenticeship Training Programme

## Phase 1: *With Employer*

Induction Training  
Introduction to Health & Safety Training  
Introduction to Tools & Equipment  
Introduction to Basic Skills

## Phase 2: *Delivered in Training Centre (20 weeks)*

### Course Content:

Induction  
Sheet Metal Fundamentals  
Geometry & Pattern Development Thermal Processes  
General Sheet Metalwork -Parallel Line, Radial Line, Triangulation  
Ductwork  
Decorative Metalwork  
Introduction to CNC Sheet Metal Manufacturing  
Related Theory

## Phase 3: *With Employer*

Work Based Assessments

## Phase 4: *Delivered in Educational Colleges (11 weeks)*

### Course Content:

Geometry & Pattern Development  
Cladding Precision Sheet Metalwork  
Stainless Steel  
General Sheet Metalwork  
Metal Roof Work  
Panel & Double Curvature Work  
Thermal Processes  
CNC Programming and Operating  
Related Theory

## Phase 5: *With Employer*

Work Based Assessments

## Phase 6: *Delivered in Educational Colleges (10 weeks)*

### Course Content:

Geometry & Pattern Development CAD/CAM/IT  
Stainless Steel  
General Sheet Metalwork  
Metal Roof Work  
Thermal Processes  
Special Areas  
Related Theory

## Phase 7: *With Employer*

Work Based Assessments

*The overall duration of this apprenticeship is a minimum of 4 years provided all phases are successfully completed. On successful completion of the programme the learner is awarded a Level 6 Advanced Certificate Craft – Sheet Metalworking.*

For further information please contact your local Education & Training Board Training Centre or log onto [www.SOLAS.ie](http://www.SOLAS.ie)

# The Craft of Sheet Metalworking



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EUROPEAN UNION

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European Social Fund

 **Apprenticeship**

KNOWLEDGE. SKILL. COMPETENCE

## Overview

Sheet metal workers work with thin metal sheets (up to 3mm thick) which they bend, cut and shape using hammers, small presses, roller machines and guillotines. Sheet metal workers are usually employed by firms manufacturing such articles as ventilation equipment, catering and food processing equipment, computer and data communications hardware and can also be involved in vehicle manufacture.

## Work activities

Sheet metal workers work with sheet steel, galvanised steel, stainless steel, aluminium, copper, etc. and their work includes the cutting of these metals by using patterns or templates as guides, as well as shaping the metal by forming, bending, beating or rolling by means of manual and CNC machinery.

Following technical drawings, they draw out the shapes they need on the flat metal. They use mathematical calculations to mark out these shapes and this involves taking into account the way metal may stretch or contract.

They use a range of hand and machine tools to cut and shape the metal and to drill or stamp holes. They may hammer down (planish) excess surface weld metal. Some sheet metal workers specialise in more complex techniques or in operating one or more of the machines.

## Personal qualities and Skills

To be a sheet metal worker you must be able to work safely in a hazardous environment. Sheet metal workers need strong practical skills and a logical, well-organised and thorough approach to their work. They also need the ability to follow engineering drawings.

Sheet metal workers need good observational skills to spot flaws or dents. Attention to detail is very important when using, marking out and measuring equipment. Good number skills are needed to take measurements and use calculations to work out shape sizes.

## Aspects of Work

- Learning new practical skills
- Using tools or machinery to shape metal
- Learning and developing new craft-related skills, knowledge and competence
- Operating machines
- Being physically active
- Being accurate with numbers in counting, measuring and arithmetic
- Working in a workshop or factory
- Working in a noisy environment
- Practical skills and theoretical knowledge
- Understanding technical drawings and diagrams
- Lifting or carrying heavy items
- Taking responsibility for own learning, including the allocation of study time

## Opportunities

Opportunities arise from time-to-time for promotion to supervisor level. Many people use an apprenticeship as a first step in proceeding to such occupations as instructors, teachers, training advisers, managers and owners of businesses.

Where apprentices and crafts persons have the necessary ability, initiative and basic qualifications, opportunities are available for advancement. These include advanced technological and management courses which are available in Institutes of Technology, schools of management, professional institutes, etc.

People anxious to advance themselves in their careers are advised to discover for themselves what opportunities are available.

## Educational Requirements

The minimum age at which the employment of an apprentice may commence is 16 years of age.

The minimum educational requirements are:

1. Grade D in five subjects in the Department of Education & Science Junior Certificate Examination or an approved equivalent,  
or
2. The successful completion of an approved Pre-Apprenticeship course  
or
3. Three years' work experience gained over sixteen years of age in a relevant designated industrial activity as SOLAS shall deem acceptable

You must obtain a job as an apprentice in your chosen occupation. Your employer must be approved to train apprentices and must register you as an apprentice within 2 weeks of recruitment.

In certain crafts, apprenticeship applicants are required to pass a colour vision test approved by SOLAS.