

# 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 (24 weeks)*

### Course Content:

Induction  
Basic Engineering  
Electrical 1  
Electronics 1  
Measurements - Pressure  
Measurements -Flow  
Measurements - Level  
Measurements - Temperature  
Final Control Elements  
Automatic Control  
Related Theory

## Phase 3: *With Employer*

Work Based Assessments

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

### Course Content:

Electrical  
Electronics 2  
Measurements  
Final Control Elements  
Automatic Control  
Related Theory

## Phase 5: *With Employer*

Work Based Assessments

## Phase 6: *Delivered in Educational Colleges (11 weeks)*

### Course Content:

Digital Electronics  
Measurements  
Control Systems  
Related Theory

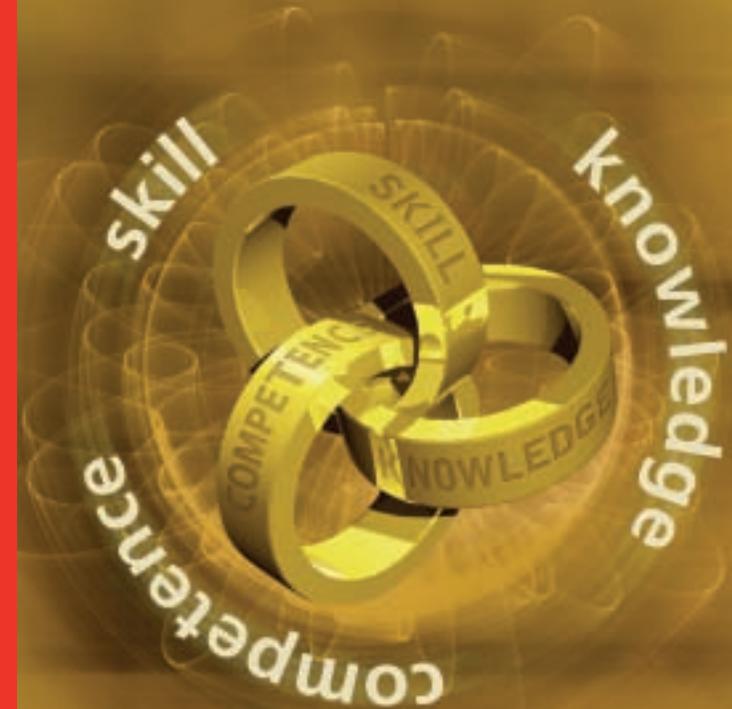
## Phase 7: *With Employer*

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 - Instrumentation.*

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 Instrumentation



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EUROPEAN UNION

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European Social Fund

 **Apprenticeship**

KNOWLEDGE. SKILL. COMPETENCE

## Overview

The Instrument Craftsperson carries out installation, maintenance and calibration of measuring instruments, sensors, transmitting and controlling devices and systems associated with the measurement, control and protection of physical quantities found in these industries. The measurement and control of these quantities enables products to be produced to specification, taking account of the safety of personnel, plant and equipment and the protection of the environment

Instrumentation craftspersons are employed in the following areas

- Installation of measurement and control equipment in pharmaceutical, food and other industries.
- Maintenance of the instrumentation equipment in these industries.
- Sales of instrumentation equipment

## Work activities

The work of instrumentation craftworkers involves the maintenance and repair of all instruments used in the measurement and control of process variables (e.g. in the chemical industry to measure and control the temperature, pressure and flow, as appropriate, in various points of the process). The work also involves the mechanical, electrical repair and calibration of indicators, controllers, recorders and transmitters.

## Personal qualities and Skills

You need to be able to read, understand and analyse engineering drawings. Good number skills are important to make precise measurements and make calculations.

A practical approach to problem-solving is necessary. You need to work logically and plan your work.

Co-ordination and hand skills are important for using a wide range of machine tools, hand tools and other equipment.

## Aspects of Work

- Learning new practical skills
- Working with electricity or electronics
- Being responsible for controlling or adjusting equipment
- Learning and developing new craft-related skills, knowledge and competence
- Understanding and using physics
- Using mathematics to solve technical or scientific problems
- Learning how machines work
- Understanding technical drawings and diagrams
- Work requiring accuracy and attention to detail
- Being accurate with numbers in counting, measuring and arithmetic
- Practical skills and theoretical knowledge
- Keeping accurate records or reports
- Being well-organised and careful with practical tasks
- Being interested in manufacturing or processing industries
- 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.