

Apprenticeship Training Programme

Phase 1: With Employer

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

Phase 2: Delivered in Training Centre (27 weeks)

Course Content:
Induction
Electricity/Electronics
Installation Techniques
Measurement - Pressure
Measurement - Flow
Measurement - Level
Measurement - Temperature
Automatic Control
Related Theory

Phase 3: With Employer

Work Based Training and Assessments

Phase 4: Delivered in Educational College (21 weeks)

Course Content:
Electricity, Motors & Motor Control and Power Distribution
Hazardous Environments
Electronics
Measurement
Final Control Elements
Automatic Control
Related Theory

Phase 5: With Employer

Work Based Training and Assessments

Phase 6: Delivered in Educational College (11 weeks)

Course Content:
Electricity, Motor Speed Control and Measurement
Switchboards & Switch Gear
Electronics
Communications Systems
Related Theory

Phase 7: With Employer

Work Based Training and 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 – Electrical Instrumentation

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The Craft of Electrical Instrumentation



For further information please contact your local Education & Training Board Training Centre or log onto www.SOLAS.ie



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 **Apprenticeship**
KNOWLEDGE | SKILLS | COMPETENCE

What is an Electrical Instrumentation craftsman?

The Electrical Instrumentation craftsman is involved in the installation, commissioning, testing and maintenance of various wiring systems and services within the commercial and industrial sector. Their work also includes 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 Electrical Instrumentation craftsman 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. Electrical Instrumentation craftsmen are employed in the installation and maintenance of measurement and control equipment in pharmaceutical, food and other industries.

Personal Qualities and Skills

As an Electrical Instrumentation craftsman you will need to be physically active and to be able to work with your hands. An awareness of health and safety and good housekeeping is essential as well as attention to detail and an eye for the aesthetic.

The Electrical Instrumentation craftsman must have the ability to:

- Plan and organise
- Communicate effectively
- Solve problems
- Work independently and as part of a team
- Show a positive attitude
- Recognise the need for good customer relations
- Demonstrate good work practices including time keeping, tidiness, responsibility, quality awareness and safety awareness

Aspects of work

- Learning and developing new practical craft-related skills, knowledge and competence
- Working with and learning from experienced Craftsmen
- Comply with Health and Safety requirements
- Working with electricity or electronics
- Understanding and using physics
- Using mathematics to solve technical or scientific problems
- Being responsible for controlling or adjusting equipment
- Working on machines/processes
- Understanding technical drawings and diagrams
- Accuracy and attention to detail
- Being accurate with numbers in counting, measuring and arithmetic
- Working with a variety of specialised hand tools, power tools and equipment
- Keeping accurate records of all calibrations or reports
- Being well organised and careful with practical tasks
- Taking responsibility for their own learning, including the allocation of study time
- Being physically active
- Passing all your phase exams (theory, practicals skills demonstration)
- Earning as you learn

How to become an Apprentice

- You must obtain employment as an apprentice in your chosen occupation.
- The employer must be approved to train apprentices.
- The employer must register you as an apprentice within two weeks of recruitment.
- In certain crafts, apprenticeship applicants are required to pass a colour vision test approved by SOLAS.

Entry 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 & Skills 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

It should be noted that these are the current approved **minimum educational requirements** for apprenticeship programmes, however, previous experience of the following subjects would be an advantage but not essential: Mathematics, Technology, Technical Drawing/ Graphics and Physics.

Opportunities on Qualification

On successful completion of the apprenticeship programme, apprentices are qualified to work within the recognised trade or profession.

Where craftsmen have the necessary ability and initiative, opportunities are available for advancement. These include advanced technology courses and management courses which are available in Institutes of Technology, Schools of Management and Professional Institutes.

Many craftsmen use their qualification as a platform to launch careers such as engineers, managers, owners of businesses, teachers and instructors amongst others.