

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 (20 weeks)

Course Content:
Introduction and general workshop skills
Turning
Milling
Thermal Processes
Plant & Machine Maintenance
Fluid Power Systems
Introduction to CNC (Computer Numerical Control)
Introduction to Abrasive Wheels

Phase 3: With Employer

Work Based Training and Assessments

Phase 4: Delivered in Educational Colleges (11 weeks)

Course Content:
Bench Fitting
Turning
Milling
Thermal Processes
Plant, Machine Maintenance & Electrical
Automation & Control
CNC Programming

Phase 5: With Employer

Work Based Training and Assessments

Phase 6: Delivered in Educational Colleges (11 weeks)

Course Content:
Manufacturing Processes
Integrated Automation and Control
CAD/CAM (Computer Aided Design and Computer Aided Manufacturing)
IT (Information Technology)
Plant and Machine Diagnostics
Thermal Processes

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 – Mechanical Automation and Maintenance Fitting

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The Craft of Mechanical Automation and Maintenance Fitting



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 a Mechanical Automation and Maintenance Fitter?

The work of the Mechanical Automation and Maintenance Fitter involves plant and machinery installation, maintenance and repair, replacement of broken or worn parts, adjustment and servicing.

The work also involves fabrication of replacement parts using machine tools i.e. lathes, milling machines, grinders etc.

Components may have to be repaired or fabricated using welding, brazing, riveting and soldering techniques. Increasingly machines and processes involve integration of computer, electronic and programmable control systems with mechanical/hydraulic, pneumatic systems e.g. PLCs (Programmable Logic Controllers), CNC (Computer Numerical Control), Robots and CIM (Computer Integrated Manufacturing).

Mechanical Automation and Maintenance Fitters require many skills including:

- Working with a variety of specialised tools - lathes, milling machines, grinders
- Working with drilling and milling machines and welding plants
- Knowledge of CNC.
- Interpreting technical drawings and diagrams
- Dismantling, Repair/Make and Fitting of new parts when performing plant maintenance
- Installation of plant and production equipment
- Condition monitoring using modern maintenance techniques
- Report writing of completed repairs

Personal Qualities and Skills

As a Mechanical Automation and Maintenance Fitter 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.

Aspects of work

- Learning and developing new practical craft-related skills, knowledge and competence
- Working with and learning from experienced Craftspersons
- Seeing a job through from start to finish
- Comply with Health and Safety requirements
- Using tools and operating machinery
- Being responsible for controlling or adjusting equipment
- Demonstrate good analytical and troubleshooting skills
- Understanding technical drawings and diagrams
- Being accurate with numbers in counting, measuring and arithmetic
- Being well organised and careful with practical tasks
- Keeping up to date with changing technologies
- Being physically active
- Taking responsibility for own learning, including the allocation of study time
- Working in a noisy environment
- Using tools or machinery to restore/repair/fabricate parts
- Working with control systems
- Passing all your phase exams (theory, practicals skills demonstration)
- Earning as you learn

The Mechanical Automation and Maintenance Fitter 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

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: Metalwork, Physics, Engineering, Technology, Mathematics and Technical Drawing/Graphics.

Opportunities on Qualification

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

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