

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:
Induction
Bench Fitting
Turning
Milling
Surface Grinding
Press Tools, Jigs & Fixtures, Mouldmaking
Introduction to CNC

Phase 3: With Employer

Work Based Training and Assessments

Phase 4: Delivered in Educational Colleges (11 weeks)

Turning
Milling
Surface Grinding
Engineering Steels, Mouldmaking, Jigs & Fixtures
CNC (computer numerical control) Programming, Operations
and Computers

Phase 5: With Employer

Work Based Training and Assessments

Phase 6: Delivered in Educational Colleges (11 weeks)

Course Content:
Machining
Press Tools & Polymer Forming Techniques
CAD/CAM (Computer Aided Design and Computer Aided Manufacturing)

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 - Toolmaking.

Ver 2

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

The Craft of Toolmaking



Ireland's EU Structural and Investment Funds Programmes 2014 - 2020

Co-funded by the Irish Government and the European Union



EUROPEAN UNION

Investing in your future
European Social Fund

 **Apprenticeship**
KNOWLEDGE | SKILLS | COMPETENCE

What is a Toolmaker?

A Toolmaker is a skilled worker who produces and maintains precision tools used in the production of metal, plastic and other materials of all shapes and sizes. The work of a toolmaker involves interpreting drawings and technical data to machine and assemble jigs, fixtures, moulding tools, dies and punches. Care and attention to detail and high precision are the hallmark of toolmaking.

Toolmakers work to high specifications and quality requirements to produce machine tools used in manufacturing. Manufacturing industries use the tools to make a diverse range of parts and products. Toolmakers also make moulds to form shapes, jigs to guide cutters or hold a part in place, and dies, which are shaped blocks that are used to cut, stamp or press materials.

Toolmakers require many skills including:

- Accuracy with measurements and calculations
- Ability to interpret engineering drawings to plan the production of a given part or product in accordance with manufacturers specifications.
- Operating a range of milling and boring machinery, lathes and CNC equipment in the manufacture of parts and products based on the drawings specified
- Assembling of manufactured parts ensuring correct and accurate assembly of finished components.
- Use of a range of hand and power tools
- Testing finished product and assessing for accuracy in accordance with specified drawings.
- Implementing all relevant health and safety legislation in their work practices
- Use of manufacturing machinery and measuring equipment

Personal Qualities and Skills

As a Toolmaker 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 Toolmaker 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.