Introduction to Apprenticeships

An apprenticeship is a programme of structured education and training, which formally combines work place learning with learning in an education or training centre. These new manufacturing engineering apprenticeships were designed with close alignment to the current and future needs of the Irish manufacturing industry.

There are currently three manufacturing apprenticeships available:

2 Years — **Manufacturing Technician, Level 6**
Higher Certificate in Engineering in Manufacturing (Apprenticeship)

3 Years — **Manufacturing Engineer, Level 7**
Bachelor of Engineering in Manufacturing (Apprenticeship)

4 Years — **Advanced Manufacturing Engineer, Level 8 - NEW in 2024**
Bachelor of Engineering (HONS) in Advanced Manufacturing (Apprenticeship)

Benefits for industry and the apprentice

- Demand Driven
- Tailored to industry needs
- Helps to combat skills shortages
- Job specific qualification
- Improved staff retention
- Future proof your organisation
- Government subsidised training

- Gain a university qualification while working
- Earn while you learn
- Career progression opportunities
- Gain valuable industry insights from an experienced mentor

Timelines

Academic block release: 15 weeks per year.

Summer intake: Apprenticeship contracts start in late July for a September academic block.

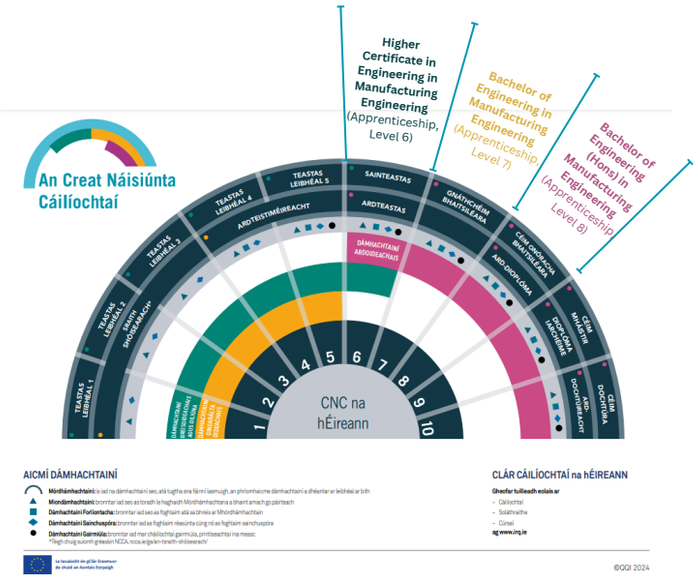
Winter intake: Apprenticeship contracts start in mid November for a January academic block.

Who should get involved?

Apprenticeships are best suited to those who learn by doing. These programmes are available to:

- School leavers (leaving certificate)
- Existing Production Operators and Technicians who want to train or retrain in the engineering and manufacturing sectors and progress along the NFQ to levels 6, 7 and 8.

> **The apprenticeship has been a great experience for me. It's a perfect way of learning new skills suited to a wide range of roles within such a strong industry. We also have the added bonus of earning while we learn. The practical experience of on the job learning means we can see different sides of the business and it gives us a chance to see where our strengths lie.**
>
> Aislinn Smith, Apprentice, Johnson & Johnson Vision Care



Ollscoil Teicneolaíochta an Atlantaigh
Atlantic Technological University

Irish Medtech
Ibec

ATU Sligo

TUS

MTU
Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

Institiúid Teicneolaíochta Dhún Dealgan
DUNDALK
Institute of Technology

Manufacturing Engineering Apprenticeship
Ibec

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www.manufacturingapprenticeships.ie

087 715 7967

GENERATION APPRENTICESHIP

Engineering | www.apprenticeship.ie

ENGINEERING

New Industry-led Manufacturing Engineering Apprenticeships

Level 6, 7 & 8 programmes available

SOLAS learning works | An Roinn Oideachais agus Scileanna Department of Education and Skills | HEA Higher Education Authority An tÚdarás um Ard-Oideachas | QQI

www.apprenticeship.ie

HIGHER CERTIFICATE OF ENGINEERING IN MANUFACTURING ENGINEERING (APPRENTICESHIP), LEVEL 6

This Apprenticeship is a **2 year programme**, with an approved employer, with 70% of the time spent on the job and the remaining 30% spent in one of the following universities: Atlantic Technological University Galway ● Technological University of the Shannon: Midwest (Limerick) ● Munster Technological University Cork ● Atlantic Technological University Sligo ● Dundalk Institute of Technology.

Job Profile

The Manufacturing Technician will be required to provide a technical support function for manufacturing operations, including troubleshooting equipment and process issues, validation and qualification activities of the manufacturing site.

Modules

Year 1	• Engineering Mathematics 1 • Manufacturing Engineering 1 • Computer Aided Design • Academic & Professional Skills • Electrical Science • Quality 1 • Industry Module 1
Year 2	• Engineering Mathematics 2 • Manufacturing Engineering 2 • Metrology • Manufacturing Design of Fixtures • Maintenance & Safety • Lean Manufacturing • Manufacturing Automation • Quality 2 • Industry Module 2

Eligible Applicants/Entry Criteria

Apprenticeships are paid employment and applicants must be in employment in a SOLAS registered company to enrol as an apprentice.

Year 1	• CAO applicants - minimum 160 points, Pass (Grade O6 or better) in five leaving certificate subjects, two of which must be Maths and a language (English or Irish). Leaving cert APPLIED is not suitable. • Cognate QQI-FET Level 5, 6 applicants plus Leaving Certificate Maths. • Mature students (over 23 years) do not require a leaving certificate but must pass a company interview.

Programme Schedule

Summer intake

	INDUSTRY INDUCTION	ACADEMIC BLOCK	INDUSTRY BLOCK
Year 1	Mid Jul - Sept	Sept - Dec	Jan - Sept
Year 2		Sept - Dec	Jan - Sept*
Year 3		Sept - Dec	Jan - Sept**
Year 4		Sept - Dec	Jan - Sept

*Level 6 apprentices finish in mid Jul

**Level 7 apprentices finish in mid Jul

Winter intake

	INDUSTRY INDUCTION	ACADEMIC BLOCK	INDUSTRY BLOCK
Year 1	Mid Nov - Jan	Jan - May	May - Dec
Year 2		Jan - May	May - Dec*
Year 3		Jan - May	May - Dec**
Year 4		Jan - May	May - Dec

*Level 6 apprentices finish in mid Nov

**Level 7 apprentices finish in mid Nov

BACHELOR OF ENGINEERING IN MANUFACTURING ENGINEERING (APPRENTICESHIP), LEVEL 7

This Apprenticeship is a **3 year programme**, with an approved employer, with 70% of the time spent on the job and the remaining 30% spent in one of the following universities: Atlantic Technological University Galway ● Technological University of the Shannon: Midwest (Limerick) ● Munster Technological University Cork ● Atlantic Technological University Sligo ● Dundalk Institute of Technology.

Job Profile

The Manufacturing Engineer will be required to enhance operational excellence within the production area to optimise existing processes, implement new processes and to ensure that production goals are met.

Modules

Year 1	• Engineering Mathematics 1 • Manufacturing Engineering 1 • Computer Aided Design • Academic & Professional Skills • Electrical Science • Quality 1 • Industry Module 1
Year 2	• Engineering Mathematics 2 • Manufacturing Engineering 2 • Metrology • Manufacturing Design of Fixtures • Maintenance & Safety • Lean Manufacturing • Manufacturing Automation • Quality 2 • Industry Module 2
Year 3	• Robotics and Control • Manufacturing Process Planning • Advanced Manufacturing Processes • Polymer Processing Technology • Project Management • Engineering Software Systems • Six Sigma Quality • Operations Management • Industry Module 3

Eligible Applicants/Entry Criteria

Apprenticeships are paid employment and applicants must be in employment in a SOLAS registered company to enrol in this programme. Recognised Prior Learning (RPL) as detailed below is available to gain advanced entry into years 2 and 3.

Year 1	• CAO applicants - minimum 160 points, Pass (Grade O6 or better) in five leaving certificate subjects, two of which must be Maths and a language (English or Irish). Leaving cert APPLIED is not suitable. • Cognate QQI-FET Level 5, 6 applicants plus Leaving Certificate Maths. • Mature students (over 23 years) do not require a leaving certificate but must pass a company interview.
Year 2	• RPL review for applicants who have completed first year of a cognate engineering programme plus 1 year of relevant industry experience* *Applicants who gain advanced entry into Year 2 must enrol for a minimum of 2 years
Year 3	• Higher Certificate in Manufacturing Engineering (apprenticeship) • Cognate Higher Certificate in Engineering (Level 6) plus 2 years relevant industry experience

"As an ex-Army Apprentice, I'm a huge advocate of the apprenticeship model. This programme has afforded Freudenberg Medical the opportunity to develop existing staff to Engineering level. I would strongly recommend this model to every company considering how to attract and retain technician and engineering talent for the future."

Barry Comerford, Advisory Board Member, Freudenberg Medical

BACHELOR OF ENGINEERING (HONS) IN ADVANCED MANUFACTURING ENGINEERING (APPRENTICESHIP), LEVEL 8

This Apprenticeship is a **4 year programme**, with an approved employer, with 70% of the time spent on the job and the remaining 30% spent in one of the following universities: Atlantic Technological University Galway ● Technological University of the Shannon: Midwest (Limerick) ● Munster Technological University Cork ● Atlantic Technological University Sligo ● Dundalk Institute of Technology.

Job Profile

The Advanced Manufacturing Engineer will be required to become the technical lead for operations within the production area, to apply and adapt emerging technologies, redesign existing processes and systems and use structured problem-solving techniques.

Modules

Year 1	• Engineering Mathematics 1 • Manufacturing Engineering 1 • Computer Aided Design • Academic & Professional Skills • Electrical Science • Quality 1 • Industry Module 1
Year 2	• Engineering Mathematics 2 • Manufacturing Engineering 2 • Metrology • Manufacturing Design of Fixtures • Maintenance & Safety • Lean Manufacturing • Manufacturing Automation • Quality 2 • Industry Module 2
Year 3	• Robotics and Control • Manufacturing Process Planning • Advanced Manufacturing Processes • Polymer Processing Technology • Project Management • Engineering Software Systems • Six Sigma Quality • Operations Management • Industry Module 3
Year 4	• Advanced Automation Systems • Process Validation & Verification • Statistical Problem-Solving Tools • Decision Theory & Data Visualisation • Sustainable Smart Manufacturing Technologies • System Integration for Operational Technology • Industry Module 4

Eligible Applicants/Entry Criteria

Apprenticeships are paid employment and applicants must be in employment in a SOLAS registered company to enrol in this programme. Recognised Prior Learning (RPL) as detailed below is available to gain advanced entry into years 2, 3 and 4.

Year 1	• CAO applicants - minimum 160 points, Pass (Grade O6 or better) in five leaving certificate subjects, two of which must be Maths and a language (English or Irish). Leaving cert APPLIED is not suitable. • Cognate QQI-FET Level 5, 6 applicants plus Leaving Certificate Maths. • Mature students (over 23 years) do not require a leaving certificate but must pass a company interview.
Year 2	• RPL review for applicants who have completed first year of a cognate engineering programme plus 1 year of relevant industry experience* *Applicants who gain advanced entry into Year 2 must enrol for a minimum of 2 years
Year 3	• Higher Certificate in Manufacturing Engineering (apprenticeship) • Cognate Higher Certificate in Engineering (Level 6) plus 2 years relevant industry experience
Year 4	• Bachelor of Engineering in Manufacturing Engineering (apprenticeship) • Cognate Bachelor of Engineering (Level 7) plus 2 years relevant industry experience

NOTE: Based on demand for the Level 8 Advanced Manufacturing Engineering Apprenticeship, it may be necessary to complete the year 3 and/or year 4 academic blocks in a Technological University outside of your region. Initially, the Level 8 programme will be available in ATU Galway and MTU ONLY.