



GENERATION APPRENTICESHIP

Electrical | www.apprenticeship.ie

INDUSTRIAL ELECTRICAL ENGINEERING

Bachelor of Engineering
(Level 7)

→ **EMPLOYER**
INFORMATION SHEET



ELECTRICAL

www.apprenticeship.ie



Course Level
Level 7 Bachelor
of Engineering

Department
Electrical & Electronic
Engineering

Duration
- 2 Year blend of Full Time
and Work Based Learning
- 2x 15 week blocks in TUS

 **ENGINEERS**
IRELAND
ACCREDITED PROGRAMME

What is an Apprenticeship?

Apprenticeship is a programme of education and training which combines learning in the workplace with learning in an educational setting such as the Technological University of the Shannon Midwest (TUS). Apprenticeship provides the opportunity for learning acquired off-the job to be applied and further developed under supervision in the workplace. The B.Eng in Industrial Electrical Engineering is one of the first advanced apprenticeships in Ireland which leads to a level 7 Degree qualification.

Who should apply for the Level 7 Apprenticeship in Industrial Electrical Engineering?

This two-year programme was developed in collaboration with the Electrical, Engineering, Automation and Manufacturing Sectors who identified a need for qualified Industrial Electrical Engineers to address the skills gaps in these sectors. The Level 7 Bachelor of Engineering (B.Eng) Degree has been specifically designed as a progression programme for qualified electricians or technicians with equivalent qualifications who wish to upskill and to acquire advanced knowledge to move into engineering roles in Industry. Candidates for the programme must be employed on an Apprenticeship contract of employment. Applications to register an apprentice can only be submitted by a Registered Employer.

Benefits to your Company

The course is a 2 year employer-led apprenticeship with 70% of the learners time spent on the job. The blend of full time and work based modules means that your apprentice can remain working in their current role for the duration of the 24-month apprenticeship contract. The apprentice will spend 2 blocks of 15 weeks in TUS over the 2 year timeframe. Your apprentice will be assigned an academic supervisor from TUS and at all stages of the 24 month programme will have the support of the academic staff and services of the University. The work based projects which are undertaken during the apprenticeship are intended to deliver significant value to your company.

Employer Registration

As part of the national apprenticeship system, there are formal requirements for approval of an employer's suitability to train apprentices and for registration of apprentices. SOLAS is responsible for delivering on these requirements. Applications for entry to the apprenticeship can only be submitted by an employer who is registered for the Industrial Electrical Engineering Apprenticeship on the SOLAS Apprenticeship Client Services System. Employers can contact TUS directly to initiate the registration process or can contact the apprenticeship training advisor from their local Education & Training Board (ETB) or SOLAS Training Centre.

Employer Approval

In conjunction with their ETB Training Advisor, the Employer must complete the 'Employer Suitability to Train Apprentices Form' (TSS-8i-FI/V3) and have it approved by the Employer's Authorised Signatory. The form declares that the Employer agrees to comply with the Apprenticeship Rules and Regulations and abide by the Code of Practice, copies of which are available from SOLAS or from the local training centre. Key commitments include providing access for the apprentice to the range of work specified in the on-the-job elements of the apprenticeship programme and to releasing the apprentice to complete all the necessary off-the-job elements. The Employer must provide details of the Apprenticeship Co-ordinator or Manager (Verifier) who will have responsibility for the programme in the Company.



Entry Requirements

Applications to the programme can only be submitted by registered Employers.

The programme is primarily designed for qualified electricians who meet the entry criteria below.

The entry qualification for the Apprenticeship can be demonstrated as follows:

- a) Holder of the Advanced Certificate (Level 6) in Craft (Electrical)
- b) Holder of the Advanced Certificate (Level 6) in Craft (Electrical /Instrumentation or Craft Refrigeration)
- c) Holder of the TUS Higher Certificate in Electrical Engineering (Level 6), or a cognate Level 6 Electrical Certificate, with relevant industrial electrical experience
- d) Registered Electrician with qualifications (National Craft Certificate / Senior Trades) other than in (a) or (b) above, can apply for access through the TUS recognition of prior learning process

Choosing a Mentor

The Employer must also provide details of a Mentor who will advise the Apprentice Engineer on their professional and educational development. The Mentor should have a minimum relevant qualification, such as a Level 7 Engineering or Technology Degree.

Alternatively, experienced practitioners with at least five years' experience of industrial electrical systems would also be considered suitable. Guidance and support for the mentor will be provided by TUS.

The Apprentice will also be mentored by an Academic Supervisor from TUS for the on-the- job stages.

How much of the Apprentice's and Mentor's time is needed during the on-the-job stages?

In the first on-the-job stage, the apprentice will have two modules to complete. Reflective Learning module and a Work Based Learning module. These will take up to two hours per week to complete and can primarily be completed in the apprentice's own time. At this stage, the Mentor should be spending 30 minutes per week with the Apprentice to assess and discuss the Work Based Learning portfolio.

In the second on-the-job stage, the Apprentice will initially need some time from the Mentor to scope out a short Work Based Learning (WBL) project but as the project progresses, this will reduce to an hour per week or a couple of hours at the end of the month. This project should be layered in with the apprentice's current work allowing them to gather data for their project while in the field but at the same time, carrying out their normal duties. The project work will take up to 2 hours per week which can be done in the Apprentices own time or partly at work, depending on the relevance of the project to their daily job.

The final on-the-job stage involves 3 modules including project management, the final industry project, and the WBL journal. The project which is undertaken at this stage should be selected by the Mentor and Apprentice to deliver significant value to the company.

Ideally, at this stage, the project activity would involve a significant portion of their time on-the-job and the project development, writing of the final year project, presenting and other WBL assignments would take up to 4 hours per week.

This stage of the course will involve regular academic supervision as the FYP will make up part of the final grade.



These industrial electrical systems include electrical power facilities & distribution boards, electrical machines & motor controls, networked industrial control systems (PLCs/SCADA), pneumatic actuated equipment, process & instrumentation (P&I) sensors/actuators, protection systems, industrial facilities & energy systems, production monitoring & tracking and any other electrical systems relevant to the industry.



Further information



Department of Electrical & Electronic Engineering

Tel: 061 293070
E: electricalapprenticeship.midwest@tus.ie
www.tus.ie



Financial Supports available to Employer
Apprenticeship employers are eligible to receive a €2,000 grant per year for each registered apprentice, effective from 01 January 2022.



GENERATION APPRENTICESHIP
Electrical | www.apprenticeship.ie



Career Profile

The Industrial Electrical Engineer is required to design, plan, assess risk, troubleshoot, program and commission a wide range of industrial electrical systems safely and in line with all relevant Irish and EU standards. The Industrial Electrical Engineer is required to compile system documentation, present proposals & analysis within the company, work with colleagues to achieve project success on-time and within the resources available, demonstrate systems operation, carry out statistical analysis & investigation, maintain, repair and regularly assess the needs for the upgrading of industrial electrical systems.

Support for Apprentice

Technological University of the Shannon Midwest will host an Induction day for the apprentices where they will be taught how to use the online reporting software. They will meet their Academic Supervisor and they will be shown how to record their work for the Work Based Learning Portfolio and Reflective Learning Journal. The apprentice will be fully supported by the academic staff during the apprenticeship and will have full access to all the facilities and supports of the University

Support for the Mentor

TUS will also host a mentor training event where mentors from the registered companies will be advised on how to effectively mentor their apprentice and what is required of them over the 24 months. This is an opportunity for the mentor to ask questions about the process and also to meet the academic supervisors. The mentor will be supported by the academic supervisor and there will be planned company visits throughout the apprenticeship.

There is no requirement for a book to be signed off by the Mentor as has been the case in historical apprenticeships as this feature is part of the online software used by the apprentice to submit their work.

Cost to consider for the Employer

For all new apprenticeships, the employer is responsible for the wages/salary of the apprentice during the 24 months of the programme, including during the off-the-job stages in TUS. There is no specified training rate or salary level, that has to be agreed between the Employer and their Apprentice.

The programme has fees that are currently set at €2,400 per year. These are payable by the apprentice and may be sponsored/subsidised by their Employer.



My goal was to get my qualification and try and get a job in the technician group in Analog Devices. As a result of this new course I was given the technician job. As you can guess I am over the moon. This made me even more determined to do myself proud and I want to say a big thanks to Analog Devices for supporting me in what I want to achieve.

Colin Gorey, Technician, Analog Devices (ADI)