B.Eng in Industrial Electrical Engineering (Apprenticeship)

What is an apprenticeship?
An apprenticeship is an alternative to full-time third-level courses. Apprenticeships are paid employment allowing the apprentice to "earn while you learn" and an excellent opportunity to get a recognised qualification while at the same time gaining on-the-job experience relevant to your chosen career.

Who should apply for the Apprenticeship in Industrial Electrical Engineering?
The Apprenticeship in Industrial Electrical Engineering leading to the award of a Level 7 Bachelor of Engineering (B.Eng) Degree has been specifically designed as a progression programme for qualified electricians who wish to upskill and to acquire advanced knowledge to move into engineering roles in Industry. The apprenticeship is a 2 year programme, with an approved employer. 70% of the time is spent on the job and the remaining 30% of the time is spent in Limerick Institute of Technology (LIT).

Who is the programme suited to?
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.

Apprenticeship contracts of employment are with a registered employer. The application for entry to the course are submitted by the employer.

Class contact hours
The programme involves a 24 month apprenticeship contract with an employer with 70% of the time spent on the job and with two 15 week blocks spent at the LIT. Contact hours while on the job will take up to 4 hours per week, which can be done in apprentice's own time or partly at work, depending on the relevance of the project to their daily work.

<table>
<thead>
<tr>
<th>Contact Hours while in Limerick Institute of Technology</th>
<th>Contact Hours while On The Job</th>
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<tbody>
<tr>
<td>Institute Block 1: 28 hours per week</td>
<td>On average 4 hours per week</td>
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<td>Institute Block 2: 28 hours per week</td>
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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.
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.

**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 LIT 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 LIT recognition of prior learning process
- **e)** Candidates with other technical /electrical qualifications equivalent to the LIT Level 6 Certificate in Electrical Technology and relevant industrial electrical experience can apply for access through the LIT recognition of prior learning process

**Timeline**

**Induction**

**Mentor Training**

**Stage 1** On the Job  September  21 weeks*
- Work Based Learning Portfolio
- Industrial Communication and Personal Development

**Stage 2** Institute Block  January  15 weeks*
- Engineering Mathematics
- Industrial Electrical Control Systems
- Electrical and Instrumentation Drawing
- Advanced Electrical Workshop
- Engineering Communications and Collaborative Working
- Electrical Planning and Layout
- Electrical Machines

**Stage 3** On the Job  May  18 weeks*
- Work Based Learning Project

**Stage 4** Institute Block  September  15 weeks*
- Probability and Statistics
- Advanced PLC systems
- Electrical Testing and Fault finding
- HV and Distributed Electrical Systems
- Energy Efficiency in Industry

**Electives (Select 2):**
- Process Instrumentation & Calibration
- Industrial Maintenance Systems
- HMI & SCADA Systems

**Stage 5** On the Job  January  35 weeks*
- Project Management
- Industrial Project
- Work Based Learning Portfolio

Stage 5 involves a significant time on-the-job (35 weeks) implementing the knowledge and skills gained. This stage will include a substantial work based project, supported by a module in project management along with both academic and industrial mentoring.

* indicative timing
Apprentice Application

Where the candidate has been approved by their employer they should complete an LIT ‘Undergraduate Advanced Entry Application Form’ with details of their prior qualifications and industrial experience. Completed forms should be emailed to: admissions@lit.ie and copied to electricalapprenticeship@lit.ie

Application forms available from the LIT Admissions office.

Electronic copies of transcripts of qualifications obtained prior to the current year must be submitted with the application form. If the candidate is presenting a foreign qualification (i.e., a qualification which has been made by a recognised body outside of Ireland and the UK) they must firstly gain QQI Validation before LIT can process your application. (Email: info@qualificationsrecognition.ie). Candidates must meet the requirements of the International English Language Testing System (IELTS) with a minimum score of 6.0, or equivalent.

Apprentice Registration

Apprentices from a registered employer, whose application has been approved by LIT, can apply for statutory apprenticeship registration with SOLAS. In conjunction with the training advisor, the Employer and Apprentice must complete the ‘Apprentice Registration Form’ (TSS-8i-F2/V7). The apprentice will receive written confirmation of their registration within 28 days along with arrangements for a mandatory apprenticeship briefing session.

Cost to consider for the Employee

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.

The off-the-job phases require full-time attendance (Monday to Friday) in LIT for 15 weeks in Stage 2 and 15 Weeks in Stage 4. There are no accommodation or travel allowances paid for this apprenticeship.

In my current role in J&J Vision Care I am responsible for planned maintenance and emergency breakdown repair to utilities and production systems. One of the main things that attracted me to this course is that it is very industry focused and relevant. Another huge plus for somebody like me who has family and financial commitments is that the apprenticeship route allows me to return to education on a full-time basis while still getting paid. I have found the lectures to be very supportive and understanding of the challenges that I have faced as a mature student. One of the main benefits of the course so far is that it has provided me with an opportunity to broaden my knowledge and has reawakened an interest in learning.

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