LIT
DEPARTMENT OF ELECTRICAL
AND ELECTRONIC ENGINEERING

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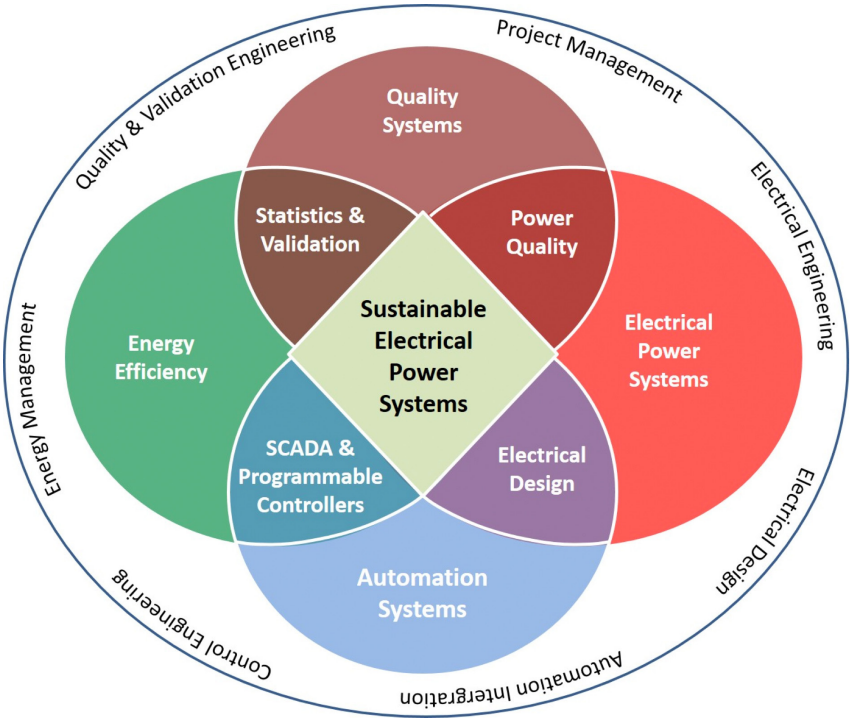
Bachelor of Science (Honours Level 8) in SUSTAINABLE ELECTRICAL POWER SYSTEMS

WHAT IS THIS PROGRAMME ABOUT?



As one of the most exciting branches in the dynamic field of engineering, electrical and automation engineering is at the forefront of how we shape the future. This one-year add-on programme was developed in collaboration with Industry to meet the need for highly qualified personnel in this sector. It is specifically designed for persons requiring advanced knowledge in the areas of Advanced Control Systems (PLC/SCADA), Energy Management, Sustainability, Electrical Power Systems, Power Quality and Data Analysis. It has a broad-based curriculum with strong practical content.

We have designed the curriculum for this course with the aim of providing breadth and depth of knowledge across the key areas of electrical engineering that cater to the ever-evolving needs of the world around us. This programme allows students to progress to employment in Electrical Power Systems, Advanced PLC/SCADA Systems, Energy Management and Control markets, as well as progression to Masters and PhD Degrees.
We need graduates who understand how to produce and supply electrical energy and to monitor and control its use. This course has an excellent record for graduate employment.

Features of the programme

- Course available part-time due to demand from industry
- Hands on course with a high practical content
- Wide range of engineering technologies are covered
- Graduates are highly employable in a variety of industries

COURSE PROGRESSION LADDER

Level 9

Post-Graduate Studies in LIT or other Academic Institutes

Level 8

B.Sc. (Honours)
in Sustainable Electrical Power Systems
(Add-on)

Level 7

Any relevant Electrical, Electronic or Manufacturing Level 7

Entry Requirements

A pass in a relevant engineering Level 7 course or an equivalent qualification with appropriate pre-requisite subjects.

Accreditation

The programme is fully accredited by Engineers Ireland

Awarding Body

Limerick Institute of Technology

Contact Information

For further information contact:-
Mr. Ian Foley, Programme Leader
Email: electrical-level8@lit.ie
Tel:- +353-61 293325
Web: www.lit.ie/Courses/A8278

Course Modules

Semester 1 Advanced Plant Automation, Electrical Power Systems 1, Statistical Process Control, Sustainable Power Conversion & Applications 1, Elective 1 *, Project.

Semester 2 Advanced SCADA & Industrial Networks, Electrical Power Systems 2, Applied Statistical Analysis, Sustainable Power Conversation & Applications 2, Elective 2 *, Project.

* Electives to be chosen from control, electrical and energy modules.

Part Time Access It is proposed to deliver this course on a part time basis over a 2 or 3 year period. Selected modules will be timetabled for one day a week.

ON COMPLETETION OF COURSE

Our Aim

We believe that a graduate of this course should be able to successfully:

- perform research emphasizing creativity, independent learning and scientific methods in a chosen area of electrical engineering
- apply advanced engineering knowledge in identifying, formulating and solving engineering problems
- select and use techniques, skills and modern tools necessary for research or professional practice
- communicate effectively
- recognize the need for, and engage in, lifelong learning

What will I be able to do when I finish the programme?

Study this course and you'll be equipped to:

- be responsible for electricity generation and distribution
- Use Programmable Logic Controllers (PLC's) & PC based systems such as SCADA applications in control and monitoring systems.
- design and develop automated solutions incorporating communication networks, control, and automation technologies.
- manage large industrial manufacturing plants and substations
- work in the electricity supply industry with special skills in power systems analysis, protection, operations, reliability, maintenance, and management.
- Measure energy usage and reduce energy wastage for commercial applications.
- design and develop energy efficient solutions for industrial applications

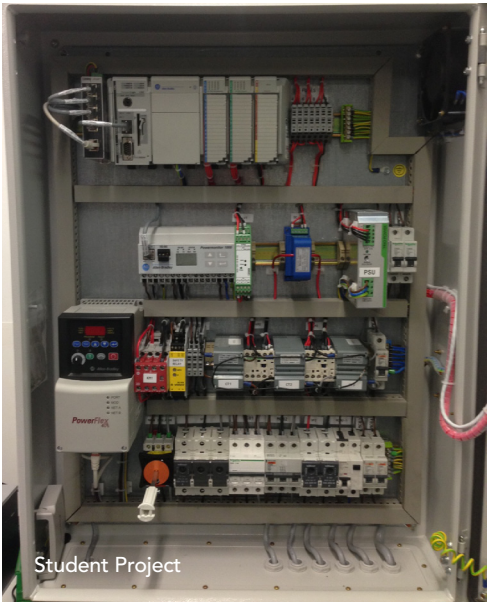
Graduates from this course may find employment in fields such as:

- Pharmaceutical Industry
- Manufacturing Engineering
- Automation Solution Providers
- Power Generation
- Renewable Energies
- Electrical Design & Contracting

Graduates have been employed by:

- Eirgrid
- ESB International
- Regeneron
- Vestas
- Siemens
- SL Controls
- Regeneron
- Zenith Technologies
- Enercon
- CID Automation
- MECO
- ABEC
- Rusal Aughinish Alumina
- Rockwell Automation

You can study to progress to a level 9 by research within LIT or in other colleges as this Level 8 is recognised worldwide.



Student Project

Frequently Asked questions

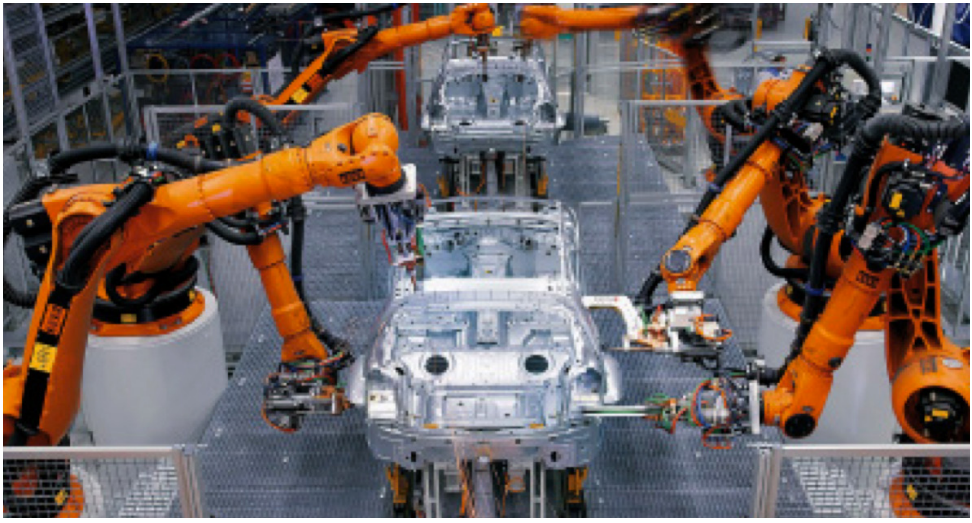
Who can do this Level 8?
Anyone with an existing Level 7 in Electrical, Electronic or Manufacturing Engineering who wants to upskill to a Level 8 honours degree can apply for the course. In the past students with a variety of Level 7s from a number of different institutes have successfully completed the programme.

What are the job prospects from this course?
Job prospect are excellent and graduates are obtaining excellent salaries. In a recent survey over 90% of graduates started on more than €28k per year and over 70% where earning more than €38k within 2 years.

Will this degree allow me to work in areas other than Electrical/Automation Engineering?
Yes, as the programme covers a broad range of technologies which can be applied in many different industries and past graduates now work in wide variety of industries. Graduates from this course have found employment in the Pharmaceutical Industry, Manufacturing Engineering, Automation Solutions, Power Generation, Renewable Energies, Electrical Design & Contracting.

Can I continue on to a Level 9 degree from this course?
Yes, once you have completed the Bachelor of Science in Sustainable Electrical Power Systems (Level 8) at LIT you can apply for an engineering level 9 within LIT and in other colleges both in Ireland and abroad.

What is the course timetable?
Typically you study around 19 hours per week with roughly a 50:50 split between lectures and labs. It is also proposed to deliver this course on a part time basis over a 2 or 3 year period. Selected modules will be timetabled for one day a week.



Graduate Feedback

Having returned to third level in 2008 as a mature student, I graduated from LIT in 2012 having completed this level 8 course. The 4 years spent in LIT equipped me with all of the necessary knowledge and experience I needed to enable me to confidently go out and pursue a choice of positions across many areas, with opportunities abroad and at home. Luckily, I found the ideal job for me in the wind energy industry, very close to home, which I have been working in for the last 2 years. I owe a lot to the staff and lecturers at LIT who helped me achieve this goal.

Adam O'Leary
Grid Solutions Engineer / Project Manager,
Enercon GmbH, based in Tralee, Co. Kerry

LIT prepared me for the workplace by giving me a FYP that incorporated skills that I had learnt in LIT but also that had aspects outside my comfort zone & knowledge which forced me to research extra skills and technology's to complete my final year project.

Patrick Potter,
Controls System Engineer, SL Controls Ltd

As a mature student, the LIT course complemented my existing electrical trade qualification and experience very well. It improved both my technical knowledge and provided some useful complementary modules such as the project management. It also helped improve my time management, a critical skill at work. Without it I certainly would not have secured this role.

Neil O'Connor,
Project Manager (Electrical Engineer),
GSK (Glaxosmithkline)

I am so happy that I chose to study in LIT. From day one I felt so welcome as a mature student. The lecturers were all so patient and willing to give up their time outside of class if I needed any extra help. Going back to study and get my degree has really improved my earning potential. LIT have also kept in touch and I feel confident that I could contact any of my past lecturers for a little help if a subject connected to theirs cropped up in a work situation. That extra effort really does mean so much.

Sinéad Harrold,
Technical Writer, Vistakon