



**LIT**

DEPARTMENT OF ELECTRICAL  
AND ELECTRONIC ENGINEERING

[www.lit.ie](http://www.lit.ie)

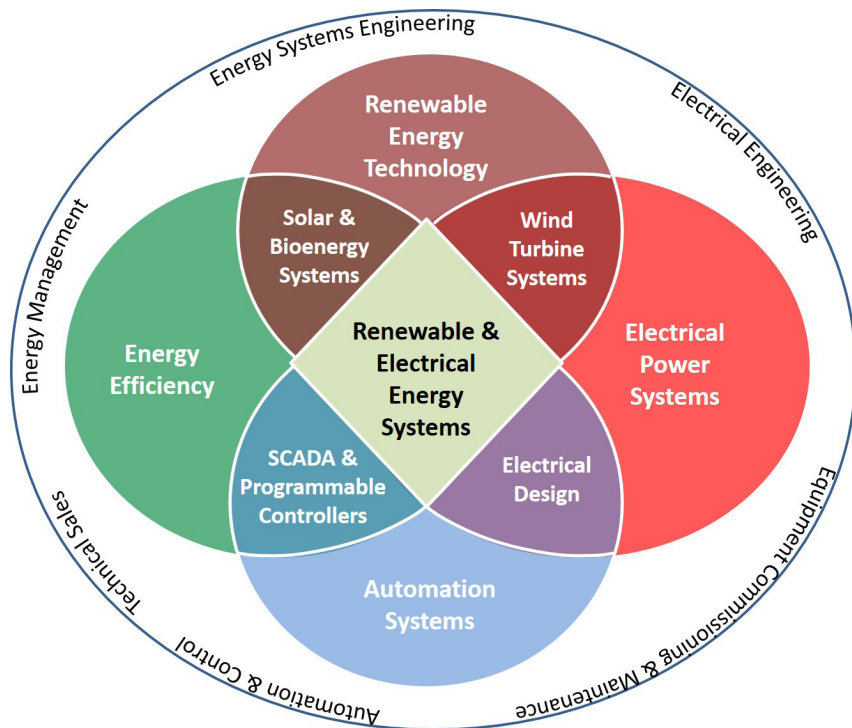
Limerick Institute of Technology  
Moylish Park  
Limerick  
Ireland

T. +353 61 293000  
F. +353 61 293001  
E. [information@lit.ie](mailto:information@lit.ie)

# Bachelor of Science (Level 7) in **RENEWABLE AND ELECTRICAL ENERGY SYSTEMS**



## WHAT IS THIS PROGRAMME ABOUT?



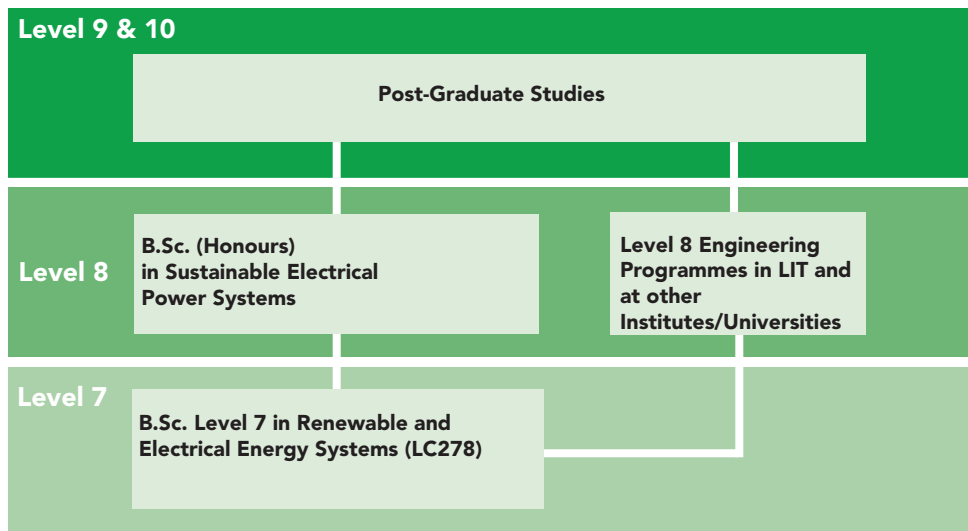
Energy, and especially electrical energy, is needed for everything we do in today's world. As it gets more expensive, more and more of our energy will come from Renewables. We need graduates who understand how to produce and supply electrical energy and to monitor and control its use.

This three year Bachelor of Science level 7 programme covers all the technologies needed to produce energy from renewable energy systems, to monitor and control them and to connect them to electricity grids such as the ESB. It is a mixture of theory and practical hands-on learning in all aspects of Renewable Energy Technology, electrical technology and automated monitoring systems. The skills learned on the programme can be used in a wide range of industries.

### Features of the programme

- Hands on course with a high practical content
- Wide range of engineering technologies are covered
- Graduates are highly employable in a variety of industries
- Allows learners to continue to a level 8 in LIT or other colleges
- Programme fully accredited by Engineers Ireland

# COURSE PROGRESSION LADDER



## Minimum Requirements

Grade OD3 in five Leaving Certificate subjects including Mathematics and English or Irish

## Awarding Body

Limerick Institute of Technology

## Contact Information

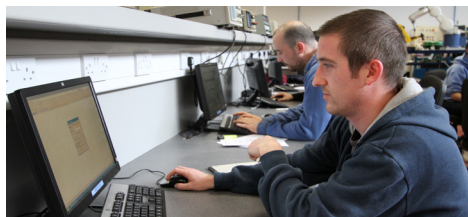
For further information contact:-

Mr. Keith Moloney

Email: [keith.moloney@lit.ie](mailto:keith.moloney@lit.ie)

Tel:- +353-61 293320

Web: [www.lit.ie/Courses/LC278](http://www.lit.ie/Courses/LC278)



## Course Modules

**Year 1** Energy Systems, Electronics, Electrical Technology, Electrical Workshop, Mathematics, Engineering Science, Technical Communications

**Year 2** Renewable Energy Technology 1, Electrical Technology 2, Electrical Workshop 2, Mathematics, Instrumentation and Control, Energy Transfer Systems, Electrical & Instrumentation Drawing (CAD).

**Year 3 Semester 1:** Renewable Energy Technology 2, Electrical Machines, PLC Systems and Applications, Power Conversion Systems, Project Management, Project.  
**Semester 2:** Renewable Energy Technology 3, Distributed Electrical Systems, Plant Information Systems, Energy Efficiency in Industry, Data Analysis & Statistics, Project.

Check us out on youtube

<http://www.youtube.com/watch?v=aQzuOE2abSs>



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

The varied nature of the programme opens up a wide range of job opportunities not just in the installation and maintenance of Renewable Energy systems but also in electrical and control systems and energy efficiency and management. Over half the graduates of the programme progress to the Level 8 honours degree in Sustainable Electrical Power Systems at LIT. It is also possible to progress to other level 8s within LIT or in other colleges as this Level 7 is accredited by Engineers Ireland and recognised worldwide. A number of graduates have continued on to Level 9 Masters degrees.

### **What will I be able to do when I finish this programme?**

A person who completes this programme will be able to:

- Select and size renewable energy systems based on the available natural resources and energy demand.
- Design the control and monitoring systems needed for renewable and electrical energy systems
- Wire and troubleshoot lighting, power, fuse board, heating control and motor control circuits.
- Measure energy usage and reduce energy wastage for commercial and domestic applications.
- Produce and interpret electrical drawings using Computer Aided Drawings (CAD).
- Use Programmable Logic Controllers(PLC's) in control and monitoring systems
- Monitor and control energy and industrial systems using SCADA

### **Employment Opportunities:**

- Installation & Maintenance of Renewable Energy Systems such as wind turbines
- Energy Management
- Industrial & Manufacturing Equipment Engineering
- Automation & Control of energy and industrial systems
- Electrical Systems Engineering

### **Graduates have been employed by:**

- Eirgrid
- ESB International
- Enercon
- Vestas
- Kingspan Renewables
- Vistakon
- Siemens
- Intel
- Rockwell Automation



## Frequently Asked questions

### What are the job prospects from this course?

Job prospects are excellent and graduates are obtaining excellent salaries. In a recent survey 95% of graduates started on more than €25k per year and over 70% were earning more than €30k within 2 years.

### Will this degree allow me to work in other areas besides renewable energy?

Yes, the programme covers a broad range of technologies which can be applied in many different industries and past graduates now work in a wide variety of industries.

### Can I continue on to a Level 8 degree from this course?

Yes, once you have completed the Bachelor of Science in Renewable and Electrical Energy Systems (Level 7) you are eligible for the one year add-on Bachelor of Science in Sustainable Electrical Power Systems (Level 8) at LIT. This Honours degree is specifically designed to follow on from the REES level 7 and to address the growing demand for graduates to work in power systems and to optimise energy efficiency. You can also apply for other related engineering level 8s within LIT and in other colleges both in Ireland and abroad.

### What standard of Maths do I need?

The minimum requirement is a pass in ordinary level maths. All the maths needed is taught in the course.

### Do I need Physics or Engineering in the Leaving Cert?

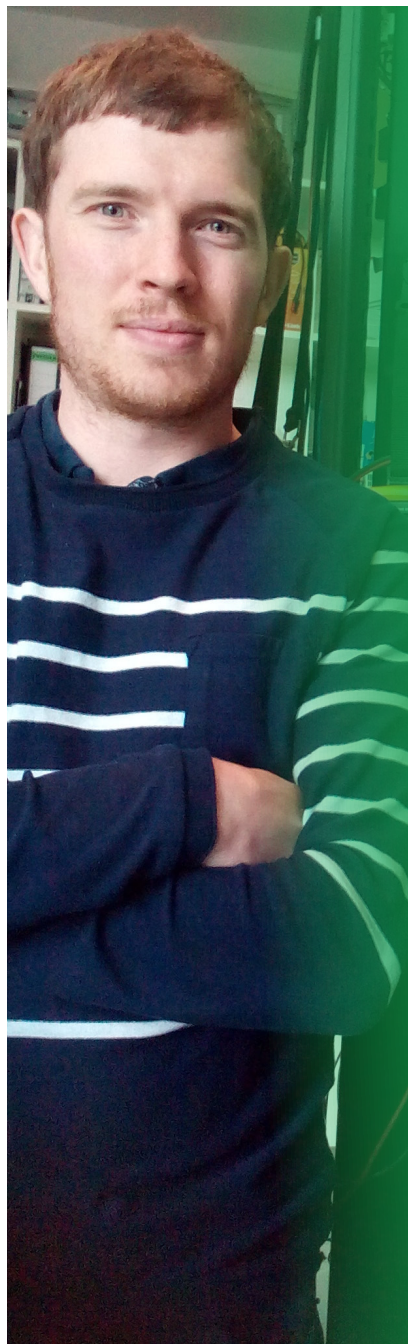
No - all the required engineering science is taught in the course.

### What is the course timetable?

Typically you study 6 subjects at a time with 4 hours per week in each, 2 hours in a classroom and 2 hours in a lab or workshop.







The Renewable and Electrical Energy Systems degree has a great mixture of practical and course work and the skills and knowledge attained allow you to pursue a variety of different career paths such as Renewable/ Automation / Electrical Engineering or Energy Consultancy. I opted for another year in college to pursue an Honours Degree in Sustainable Electrical Power Systems which ultimately led to a position as an Electrical Engineer with Eirgrid.

**Shane Slattery**

**REES Graduate 2012, SEPS Graduate 2013**

I found that the course covered a very wide range of renewable and electrical engineering topics which opens a vast amount of career opportunities to a graduate. Before I even completed my final year exams I received three job offers before finally deciding to work for Intel. A major plus to studying in LIT is how knowledgeable and experienced the lecturers are and how much they will go out of their way to help you.

**Damien McCurry**

**REES 2014**

This course covers a large number of areas in the renewable energy and electrical systems with a wide variety of modules which open up a multitude of career opportunities. One of the highlights of the course for me is how approachable the lecturers are, both while I was in college and since I started my career as an electrical engineer in ESB International.

**Patrick O'Hanlon:**

**REES Graduate 2012, SEPS Graduate 2013**

Immediately after completing the 1 year add-on Level 8 I found permanent employment as a Field Service Engineer with Enercon Windfarm Services. After 18 months with Enercon I moved to working in a manufacturing environment in Vistakon and I'm now pursuing a masters in manufacturing research part-time.

**Tony O'Connor**

**REES Graduate 2010, SEPS Graduate 2011**