LIT
ELECTRICAL
AND ELECTRONIC
ENGINEERING

Renewable and Electrical Energy Engineering (REE)

3 Year Level 7 B. Eng. Ordinary Degree

4 Year Level 8 B. Eng. Honours Degree

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REE History

First Student intake in 2005

Approx. 350 graduates so far

Working in a wide variety of fields but primarily Wind, Energy Efficiency, Automation and Electrical

Combination of theory and practical hands-on skills

Course Content

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1. Production of energy from renewable sources
   - Wind, solar, hydro and bioenergy
   - How much is there, how is it captured and how can it be used
2. Generation, supply and use of electrical power
   - Planning and Building electrical systems
   - Optimizing electrical energy use
3. Monitoring and control of energy systems
   - Technology to allow equipment to run automatically and be remotely controlled
4. Energy Efficiency and Reduction
   - How to reduce energy use and costs for large and small users

Renewable & Electrical Energy Engineering

LIT ELECTRICAL AND ELECTRONIC ENGINEERING

Year	Subjects
1st	Engineering Science, Energy System, Maths, Electrical Installation 1, Electrical Technology 1, Electronics, Project 1
2nd	Renewable Energy Technology, Maths, Electrical Installation 2, Electrical CAD, Electrical Technology 2, Equipment Control Systems, Project 2
3rd	Wind Energy & Renewable Integration, Electrical Machines & Power Distribution, Maths, Process Instrumentation & Calibration, Industrial Maintenance & Energy Efficiency, Advanced PLCs HMI and SCADA **Work Placement**
4th	Energy Management, Statistical Process Control & Applied Statistical Analysis, Advanced Automation Design and Industrial Networks, Electrical Power Quality, Electrical Power & Protection Systems, **Final Year Project**

Work Placement

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At the end of third year students do a 6 month paid work placement

- Runs from March to August
- Gain experience of working environment

Apply what they've learned to real world problems

- Have completed Level 7 degree and have useful practical skills

Could be used to work on community development projects

- Would need proper structures and funding in place

Final Year Project

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In fourth year student undertake a major project

- Normally plan and build an electrical/energy demo system

Must have real world applicability

- Ideally follows on from work placement

Could be used to work on energy development projects

- Would need clearly defined and achievable objectives
- Joint supervisor by LIT and project sponsors

Short Courses

LIT ELECTRICAL AND ELECTRONIC ENGINEERING

LIT currently offers modules by night in Solar & Wind Energy

- Each module is 3 hours one evening a week for 12 weeks
- Require basic mathematical & engineering fundamentals
- Solar currently running Jan-May
- Wind will run Sept-Dec

Also have an on-line module in Near Zero Energy Buildings

- Aimed at learners with a background in Built Environment

Other Courses could be developed if demand existed

- Course could be tailored to audience
- Would need a clearly defined demand and finance