The Master of Science in Energy and Sustainability is a 1-year full-time postgraduate taught programme, designed to meet the Framework of Higher Education Qualifications (FHEQ) at Masters level and takes appropriate account of the subject benchmark statements in Engineering.

The programme aims to

- Provide advanced knowledge and understanding of specialist topics in Energy and Sustainability.
- Develop transferable skills in research and knowledge acquisition.
- Satisfy the professional development needs of the individual and his/her employers; providing relevant training to engineering graduates who wish to pursue a career in the area of Energy and Sustainability.
- Provide a foundation for further postgraduate studies.

The programme has been structured to emphasize existing energy issues both locally and worldwide, including environmental impact and legislation. Methodologies to reduce these issues are presented using materials for sustainability, renewable energy technologies, energy management, energy storage and renewable heating and cooling.

## Learning Outcomes

### Knowledge and Understanding

- Demonstrate knowledge and understanding of current worldwide energy usage and its impact on climate.
- Demonstrate a comprehensive knowledge and understanding of the origins and distribution of different renewable energy sources (solar, wind, hydro, wave, tidal and bioenergy).
- Demonstrate a comprehensive knowledge and understanding of the storage/conversion and integration of different renewable energy sources into existing systems.
- Demonstrate knowledge and understanding of the sustainable use of materials to improve energy efficiency.
- Demonstrate a comprehensive knowledge and understanding of a number of key non-technical issues including system modelling, environmental issues and energy management.

### Practical Skills

- Demonstrate a critical awareness of theoretical design concepts and their practical implementation within renewable energy systems.
- Uses appropriate software packages and IT skills for modelling and simulation of renewable energy systems.
- Quantify resource potential and determine the appropriate renewable resource at a given site.
- Analyse the energy capture potential for solar, wind & hydro resources.
- Demonstrate practical measuring and auditing skills.
The MSc in Energy and Sustainability aims to train the next generation of engineers for Singapore’s energy sector. There will be a focus on reducing energy costs, whilst increasing awareness of and contributing to sustainable development.

Fees & Funding
Application Fee: SGD90 (non-refundable)
Tuition Fees: SGD15,000
All fees charged are subjected to prevailing taxes.

Entry Requirements
First degree in Mechanical Engineering or equivalent engineering qualification with minimum lower second class classification (2.2).

English Language Requirements
IELTS overall 6.5 or equivalent.

Applicant Eligibility
This course is only available to Singaporeans and Permanent Residents of Singapore.
How to Apply

Interested applicants to our Postgraduate Programmes, kindly refer below for the steps on the application process.

1. Prospective candidates are required to visit Newcastle Research & Innovation Institute (NewRIIS) for a Pre-application Counselling session.
   (i) Kindly email the NewRIIS team for an appointment at: newriis.research@newcastle.ac.uk
   (ii) Please bring along the following original documents for verification when you visit NewRIIS
         - national registration identification card (pink/blue)
         - highest academic qualifications
         - testimonials
         - updated CV

2. Online application for the respective programme
   (i) Before applying, please prepare the following documents/items
       - programme code (please check with PG Programme Administrator/Coordinator, if you are unsure)
       - scanned national registration card (pink/blue)
       - scanned verified educational documents
       - updated CV
       - personal statement: www.ncl.ac.uk/postgraduate/apply/guide/#personalstatement
   (ii) Create account for online application: https://aspire.ncl.ac.uk/Register
   (iii) Apply online: www.ncl.ac.uk/postgraduate/apply

3. Payment of application fee of SGD90 (non-refundable) by cheque or bank transfer. All fees charged are subjected to prevailing taxes.

Contact

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Email: newriis.research@newcastle.ac.uk

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Period of Registration:
1 November 2017 - 31 October 2018