



 **Temasek**  
POLYTECHNIC

Clean Energy

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# Clean Energy

## Industry Prospects

With increasing awareness of environmental issues, countries worldwide have been actively pursuing a clean and renewable energy agenda.

In Singapore, the government has put in place a comprehensive clean energy roadmap – which includes measures such as the “SolarNova” programme to install solar panels on the roof of 5,500 HDB blocks, a car-sharing programme involving 1,000 electric vehicles (EVs) and 2,000 charging points island-wide, and the liberalisation of the retail electricity market to allow households to select their electricity provider. These measures have effectively opened up a huge and sustainable market for clean energy professionals, giving you bright career prospects.

This course covers four key areas, namely smart energy systems, sustainable energy technologies, energy efficiency and green transportation. This will equip you with the competency to be a successful clean energy professional.



Students of this diploma have an especially important role to play in averting climate change and raising the awareness of clean energy. You will be involved in diverse “clean” and “green” activities like overseas eco study trips, the National Climate Change competition and meaningful Overseas Community Projects where solar systems are installed to bring light to third world countries.



## Career Opportunities

As Singapore strives to become a clean and green smart nation, as well as a global clean energy hub, it has invested in large-scale integrated living labs such as Smart Grids, the Cleantech Park, the Punggol Eco-Town, as well as the Electrical Vehicle Test-bed and Pulau Ubin Microgrid Test-bed. Such facilities have generated, and will continue to sustain, a strong demand for clean energy professionals in the decades ahead.

You can find exciting and fulfilling careers in the green city and infrastructure sectors as:

- Eco-product Designers
- Electrical Engineers
- Facility Engineers
- Green Entrepreneurs
- Process / Equipment Engineers
- Research & Development Engineers
- Solar Project Engineers

## Entry Requirements

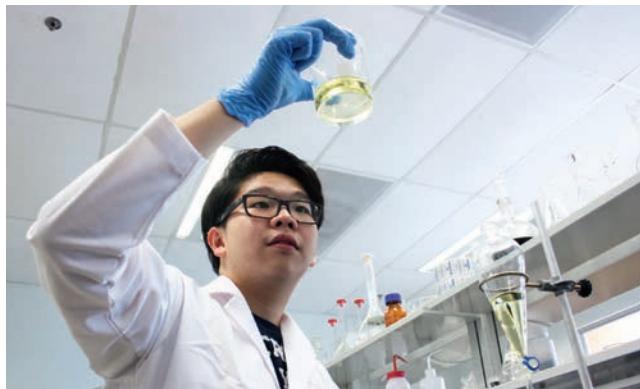
5 GCE 'O' Level subjects comprising:

English Language (EL1)	(Grades 1-7)
Mathematics (E or A Maths)	(Grades 1-6)
One of the following subjects *	(Grades 1-6)
Any two other subjects (except CCA)	--

\* Biology, Biotechnology, Chemistry, Combined Science, Computing/Computer Studies, Design & Technology, Electronics/Fundamentals of Electronics, Physics/Engineering Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry)/Physical Science.

Note: Applicants should not be suffering from severe colour vision deficiency, uncontrolled epilepsy, profound hearing loss or severe vision impairment.

## Diploma Core Subjects



### Year 1:

- Circuit Analysis
- Computer Programming for Problem Solving
- Digital Fundamentals 1 & 2
- Electronic Devices & Circuits
- Electronic Prototyping
- Engineering Mathematics 1 & 2
- Engineering Physics

### Year 2:

- Air conditioning & Mechanical Ventilation
- Electrical Services for Facilities
- Electrical Systems & Power Distribution
- Energy Management & Audit
- Engineering Mathematics 3
- Fuel Cell & Energy Storage Systems
- Microcontroller Technology
- Solar Cell & System

### Year 3:

- Data Visualisation & Analytics
- Efficient Drive & Control Systems
- Electrical Diagnostics & System Integration
- Industrial Sustainability & Energy Efficiency
- Major Project

## Further Studies

You can gain admission into a wide range of degree programmes at local and overseas universities in USA, UK, Australia and New Zealand. Advance standing for specific modules or up to 2 years exemption may be given depending on the relevance of the degree programme.

## Success Stories



Diagnosed with mild dyslexia and attention deficit disorder when she was in primary 5, **Clarisse Lee Xue Le** persevered and

managed to qualify for the Normal Academic stream. Without any special arrangement for her learning disability, she did well enough to get a place in the Diploma in Clean Energy at Temasek Polytechnic (TP) via the Polytechnic Foundation Programme, a through-train admission for 'N' level holders.

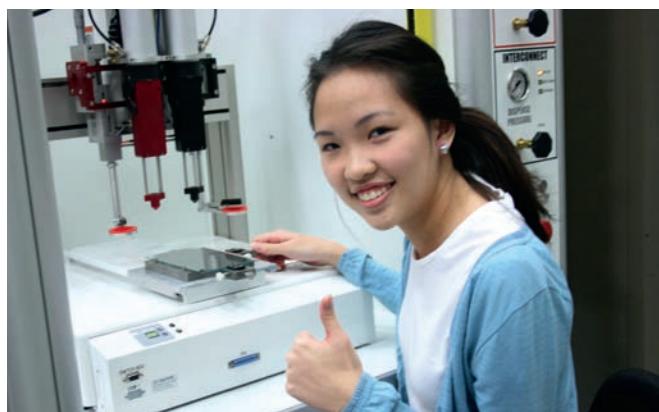
With the guidance of her dedicated lecturers, Clarisse blossomed at TP, graduating with Merit and a cumulative GPA of 3.61. Her fine academic results earned her a scholarship to pursue a Bachelor of Science degree from a University of Applied Sciences (UAS) in Germany, under the "Poly-goes-UAS" scheme administered by the Economic Development Board.

## Core Strengths

All graduates of this diploma will be awarded the Singapore Certified Energy Manager (SCEM) associate certificate which will be useful when seeking jobs in the energy efficiency and management sector.

You will also get to use our state-of-the-art facilities, such as:

- Clean Energy Research Centre, which specialises in research on alternative energy especially fuel cell technology.
- Class-100 Cleanroom, where solar cells can be designed and fabricated.
- Temasek Microelectronics Centre, which does research on micro-technology applications such as biosensors and microfluidic chips.



## Student Life & Facilities

Your life on campus will be varied and vibrant. Sporting competitions, artistic pursuits, adventure learning programmes, team building games, student club gatherings, as well as the annual Campus Care Network Day carnival when students and staff join forces to raise funds, are some of the many exciting activities that will pepper your life as a student.

Located in a picturesque environment that is close to nature, the campus provides you with the ideal setting for work, play and recreation.



Always at the forefront of technology, the School emphasises innovation, creativity, problem-based learning and a practical, hands-on approach. With a wide range of modern and well-equipped facilities, and a rigorous and industry-relevant curriculum, we are well positioned to prepare you for a bright future.

### Enquiries:

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Website: [www.tp.edu.sg/eng](http://www.tp.edu.sg/eng)

Instagram: [www.instagram.com/tpengine](https://www.instagram.com/tpengine)

YouTube channel: TPEngSch

## School of Engineering

*The information in this brochure is accurate at the time of printing  
For the latest information, please refer to our website  
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