



**Green Building &
Sustainability**

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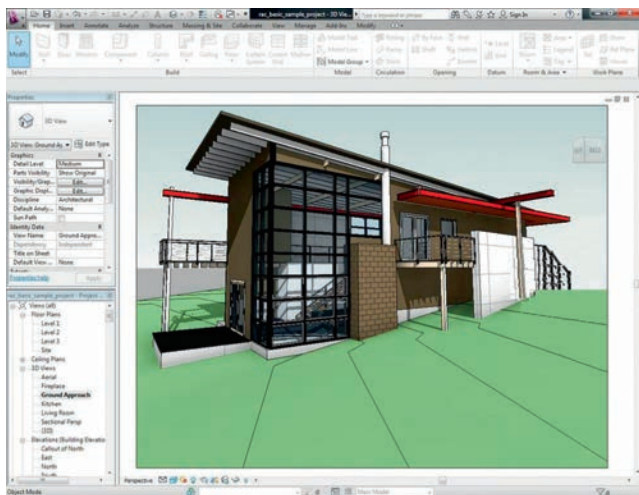
Green Building & Sustainability

Industry Prospects

With growing worldwide concern about the environment today, the focus has been on “green” buildings that are environment-friendly. These buildings are designed to reduce the impact of the built environment on human health and our natural surroundings on a sustained basis.

New buildings – commercial, industrial, as well as residential – now come with energy saving features which include not just automated high-tech gadgets, but also architectural designs to maximise natural ventilation and lighting for better comfort and energy-saving.

This course will equip you with the knowledge of green building technologies and practices, including indoor air quality, the efficient use of energy and natural resources, building management and energy auditing. You will also be trained in the use of industry software for architectural drawing and building performance simulations.



Career Opportunities

“Green Mark” certified buildings currently make up only 35% of buildings in Singapore but the government is targeting to raise this figure to 80% of all buildings by 2030. This alone gives an indication of the enormous amount of retrofitting that will need to be done to buildings in our country, creating abundant job opportunities and a sustainable demand for green building professionals.

You can look forward to rewarding careers in the energy conservation, sustainable design or building design industries, and find exciting job opportunities as:

- Building Designers / Engineers
- Building Performance Simulation Software Specialists
- Energy Consultants / Engineers
- Green Architecture Consultants
- Singapore Certified Energy Managers (SCEM)

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 uncontrolled epilepsy, profound hearing loss or severe vision impairment.

Diploma Core Subjects

Year 1:

- Circuit Analysis
- Computer Programming for Problem Solving
- Electrical Services for Facilities
- Engineering Mathematics 1 & 2
- Engineering Physics
- Introduction to Green Development
- Tropical Architecture for Sustainability
- Virtual Design & Facility Planning

Year 2:

- Air-Conditioning & Mechanical Ventilation
- Building Information Modelling Collaboration
- Building Management Systems
- Energy Management & Audit
- Green Building Modelling & Simulation
- Hydraulics & Drives
- Sustainable Design
- Sustainable Facility Management
- Total Building Performance

Year 3:

- Data Visualisation & Analytics
- Fire & Life Safety Management
- Major Project
- Project Management
- Work-Study Degree Programme *

* Students on this programme will take additional subject(s)



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.

You can also join a “through-train” Work-Study Degree Programme to secure a university place and full-time job in your 3rd year at TP!

Success Stories



When he was at Republic Polytechnic (RP), **Ganesh Kunasehkaran** would often go clubbing, smoke and drink heavily, skip classes, and neglect his studies. Consequently, he failed several modules and was removed from his diploma course in his final year. But where RP turned him away, Temasek Polytechnic (TP) took him in.

Grateful to be given another chance, Ganesh turned over a new leaf and worked hard. He did so well in his first year at TP that he won a scholarship from the Building & Construction Authority worth \$15,000 per year for his remaining 2 years of study.

With the help of his dedicated lecturers, Ganesh graduated with a Diploma in Green Building & Sustainability (Merit), and won the Course Gold Medal as well as the Lee Kuan Yew award with a cumulative Grade Point Average (CGPA) of 3.97.

Core Strengths



This course is the most established local programme in the field of green buildings, as TP was the first polytechnic to offer such a diploma course. The curriculum is built upon the strong foundation of its predecessor course, the Diploma in Intelligent Building Technology, which was offered since 1995.

Our lecturers are former professionals such as architects, facilities engineers, mechanical, electrical and structural specialists, and building project managers – all experts in their respective fields and skilled in green technologies – so you get experienced guidance and the most up to date curriculum.

Our core strengths lie in two main areas, namely: Green Building Architecture & Systems Design and Energy Efficiency Performance. The former focuses on green building features, development and trends in built environment, while the latter covers energy management and optimisation.

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 colourful and 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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Instagram: www.instagram.com/tpengine

YouTube channel: TPEngSch

School of Engineering

*The information in this brochure is accurate at the time of printing
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