ARCHITECTURAL TECHNOLOGY & BUILDING SERVICES

Temasek Polytechnic
School of Engineering

ARCHITECTURAL TECHNOLOGY & BUILDING SERVICES

Course Overview

This pioneering multi-disciplinary polytechnic course is dedicated to harnessing technology and digitalisation to shape the smart, sustainable buildings of tomorrow. You'll gain hands-on experience with innovative digital tools and integrated design strategies that minimize energy consumption and reduce carbon footprints.

Learn to evaluate the economic benefits of enhancing energy performance and master the selection of sustainable materials essential for green buildings.

- Built upon the strong foundation of our predecessor courses, the Diploma in Intelligent Building Technology (since 1995), and then subsequently revamped as the Diploma in Green Building & Sustainability in 2010
- Training by lecturers who are experts in their respective domains, to give you a highly industry-relevant learning focus
- Aligned to in-demand sustainability skills-sets such as those of Architectural Technologists and Environmental Sustainability Design (ESD) engineers – ensuring that you will definitely be highly employable

Career Opportunities

In alignment with the Singapore Green Plan 2030, which aims to ensure that 80% of the built environment is "green" over the next decade, there is a growing emphasis on developing eco-friendly districts and super-low energy buildings on a significant scale.

Hence, you can anticipate promising career opportunities in green-collared roles, particularly within the field of architectural technology and building systems design.

There are exciting jobs in companies at the forefront of sustainable design and development, such as:

- Architectural Technologists
- Building Automation Technologists
- Digital Delivery Management Specialists
- Energy Management Executives
- Environmental Sustainability Design (ESD) Engineers / Architects
- Green Building Designers

What You'll Study

Select the Elective Cluster that brings your dream job to life!

Year 1:
- Artificial Intelligence in Engineering
- Climate Responsive Design Simulation
- Computer Programming for Problem Solving
- Digital Modelling for Architecture
- Engineering Mathematics 1 & 2
- Engineering Physics
- Generative Design for Architecture
- Principles of Sustainable Design

Year 2:
- Air-Conditioning & Mechanical Ventilation
- Building Management Systems
- Building Performance Modelling
- Building Systems Modelling
- Data Visualisation & Analytics
- Electrical System Design for Buildings
- Energy Management & Audit
- Fire & Life Safety Management
- Integrated Design Studio

Year 3:
- Major Project

Advanced Engineering Skills Elective Cluster #
- Advanced Skills Practices

Environmental Sustainability Elective Cluster #
- Life Cycle Analysis
- Project Management

Structured Work-Based Learning Elective Cluster #
- Work-Based Learning

University Pathway Programme (NUS) # ^

University Pathway Programme (SUTD) # ^

Students must choose one of these cluster electives
^ For selected students

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T29
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The information in this brochure is accurate at the time of printing
For the latest information, please refer to our website
Date of printing: Jan 2025