

NEW INITIATIVES

Building Competencies

Building on the strong foundation laid in the previous year, the Polytechnic made much progress to becoming great. Guided by the four strategic thrusts - Formulating an Education Model of the Future; Unleashing Creativity, Innovation and Enterprise; Creating the SP Experience for Students; and Making Singapore Polytechnic a Great Place to Work - the institution launched a number of initiatives during the year.

Forty-one General Elective Modules (GEMs) in the Arts and Humanities, Business and Management, and Science and Technology, were made available to students during the year. These complemented the Innovation, Design and Enterprise in Action (IDEA) and Critical Reasoning Skills modules aimed at nurturing students who are creative, innovative and enterprising, and competent in areas beyond their core discipline.

Headway was made in the area of implementing a Flexible Learning System with the introduction of several Diploma Plus programmes for academically advanced students. The programmes would not only broaden the students' educational experience but also earn them an additional qualification to enhance their employability.

The Diploma Plus programme started with over 80 students. In addition to their diploma course, the students from the Aeronautical Engineering, Aerospace Electronics, Chemical Engineering and Electronics, Computer & Communication Engineering courses pursued a Certificate in Engineering Mathematics.

In the pipeline were a Specialist Diploma in Digital Film & Television and a Specialist Diploma in Computer Numerical Control (CNC) Applications for students pursuing the Diploma in Media & Communication and the Diploma in Mechanical Engineering, respectively.

Also, students at the School of Mechanical & Manufacturing Engineering and School of Business, with the exception of those pursuing a Diploma in Business Information Technology, would be offered the opportunity to graduate with a Certificate in Software Programming & Application in the new academic year.

These initiatives contributed to making the education model relevant, progressive and forward looking.

To give students an exceptional experience on campus, effort was made to provide improved services, upgrade campus facilities, and offer students more lifestyle and recreational opportunities. An example of this was the new Student Administration System (SAS) which gave students a one-stop access for registration, payments and information, among other things.

The Polytechnic continued to invest heavily in staff development and training with \$2.48 million allocated for the implementation of its Total Learning Plan for the financial year. This and other improvements in employment terms like a five-day week and working conditions went some way to making Singapore Polytechnic a great place to work.



◀ Broader exposure for students through General Elective Modules with choice of Arts and Humanities, Business and Management and Science and Technology.



▲ Additional foreign students due to Singapore Polytechnic International's effort will give the campus a global flavour.

International Business Arm Set Up

Singapore Polytechnic International Pte Ltd (SPI), an independent company to recruit full-fee paying students, was registered on 22 November 2004.

By opening up its full-time diploma courses on campus to foreign students and by partnering reputable educational institutions overseas to deliver its courses in part, the institution could go global.

This new initiative had the added benefit of enhancing the quality of education in Singapore Polytechnic by enriching the learning experience of students and staff with the infusion of foreign students.

In addition, this international arm of Singapore Polytechnic aligned the institution with the national effort to build Singapore into an education hub.

Students from emerging education markets such as China, India, Indonesia, Sri Lanka and Vietnam were the focus of SPI for a start. Its target was an initial enrolment of 250 students, growing to 1,200 full-fee paying foreign students on campus in five years.



▲ New IDEA Centre a hub for creativity, innovation and enterprise for staff and students.

IDEA Centre Takes Off

The Innovation, Design & Enterprise in Action (IDEA) Centre was officially launched during the year and spearheaded the institution's creativity, innovation and enterprise drive.

Together with the technology centres and other R&D facilities on campus, the Centre, incorporating an Innovation Studio, would push the boundaries for creative exploration and innovation, leading to tangible products for commercialisation in future.

One of the Centre's projects was the IDEA Challenge, organised in collaboration with the Department of Industry Services. It attracted over 300 entries from students.

◀ IDEA Challenge catches the imagination of students who submitted more than 300 ideas.

Advancing for Tomorrow

2004 was a watershed year. Even as the Polytechnic celebrated 50 years of opening minds and shaping lives, it had put in place plans to meet future challenges.

Curriculum was revamped and new courses and options were developed to meet industry demands. R&D work was stepped up while rejuvenation of the campus was pursued aggressively.

Meeting Future Manpower Needs

Two new full-time diploma courses - the Diploma in Bioelectronics by the School of Electrical & Electronic Engineering and the Diploma in Music & Audio Technology by the School of Info-Communications Technology - were launched for the new academic year.

Plans were underway in the School of Business to offer the Entrepreneurship Concentration module to students on the Diploma in Business Administration. The module, aimed to inculcate an entrepreneurial mindset and nurture potential entrepreneurs, would provide students the opportunity to run their own businesses whilst on the course. Lecturers and entrepreneurs from industry would be on hand to guide the students.

On-going R&D Work

Numerous R&D projects were initiated - many in collaboration with industry. This allowed staff and students to keep abreast of the latest developments in their fields, work in multi-disciplinary teams, and practise creativity, innovation and enterprise.

At the School of Info-Communications Technology, the first prototype of the Smart-Mirror: 3D Interactive Software for Selection of Spectacles was completed. The project aimed to allow customers to try virtual spectacles without the need to wear physical ones.

In an example of cross-discipline collaboration, the Singapore Maritime Academy and Singapore Polytechnic Optometry Centre started two projects on student eyesight.

Staff and students of the School of Mechanical & Manufacturing Engineering took on the Design and Manufacture of Customised Foot Insoles project. It had them exploring the use of custom-made insoles or orthoses for the management of foot problems.

Research on the Development of Plastic Bistable Liquid Crystal Technology and their Application to the Fabrication of Electronic Books and Effect of Ascorbic Acid on Ferric Reduction in Pasteurised Orange Juice were some of the on-going work in the School of Chemical & Life Sciences.



▲ A glimpse of what the reconstructed main entrance area along Dover Road will look like when completed.



▲ Artist impression of new Phase 2A campus redevelopment project to house School of Chemical & Life Sciences facilities and Centre for Creativity, Innovation and Enterprise.

Over at the School of Design & the Environment, several on-going R&D projects were pursued, including:

- Development of a Model Ecoculture System Based on Solar Energy and Rainwater Collection
- Mobile Industrial Network Integrating 3G over iEthernet for Mobile Experiments
- Waste Concrete Reclamation and Wastewater Recycling in Concrete Batching Plants
- Water Saving Closet and Regulated Flow Rate for Water Services System in Domestic Buildings

Rejuvenating the Campus

Redeveloping the campus to provide a conducive environment continued to be a key strategy to ensure that the Polytechnic remains at the forefront.

A major reconstruction project that would change the face of the institution was initiated. It involved moving the main entrance along Dover Road to a more visible location for staff, students and visitors.

Also on track was the building of the \$19 million six-storey complex to house the Centre for Creativity, Innovation and Enterprise, the Technology Centre for Life Sciences, and teaching and supporting facilities of the School of Chemical & Life Sciences.

Plans were made to provide for an effective pedestrian distribution system for those coming from the Dover MRT Station. Covered links would be built along the campus perimeter along Commonwealth Avenue West to enhance the safety and comfort of pedestrians.

In addition, funds were secured to upgrade buildings and facilities developed under Phase 3 of campus development which include Teaching Blocks 19 to 22.

► New diploma course in Bioelectronics to meet manpower needs of industry.

