

# ACADEMIC ACHIEVEMENTS

## School of Business

The year was marked by many achievements on the student front and new initiatives taken to bring the School to greater heights.

Overseas exposure helped to enhance the students' learning experience. In May 2004, Diploma in Accounting and Diploma in Banking & Financial Services students visited the University of Salford, UK as part of the Corporate Finance Credit Transfer programme. In November 2004, 21 other students participated in an educational tour to learn more about the business environment in India.

The China Seminar cum Industrial Training Programme; Entrepreneurship Study Tour of Asia programme in Bangkok, Thailand; Korea Study Tour; and China Study Tour also benefited students immensely.



▲ Students get a taste of entrepreneurship at a flea market.



▲ Students honing their skills during the Business Plan presentation.



▲ Meaningful activities for school students such as the National Entrepreneurship Convention allow the School of Business to share its expertise and resources with schools.

Linking up with industry was another strategy adopted by the School for a world-class education. Final-year Diploma in Business Administration students, for instance, were challenged to develop a marketing plan for MobileOne Ltd. Through such company-linked projects, students could apply their knowledge to real-world business situations, with the added benefit of industry practitioners evaluating the feasibility of their business plans.

In addition, two flea markets were held in September and December 2004 to give students hands-on experience in entrepreneurship.

As proof of the quality of business education in the Polytechnic, 13 Diploma in Banking & Financial Services graduates passed the very first Singapore Technical Analysts and Traders Society's Certificate in Technical Analysis examination in September 2004.

Community service remained high on the agenda. Twenty-two students embarked on a two-week Message of Love Expedition to Liuku in Nujiang, China as part of the Singapore International Foundation's Youth Expedition Project to increase awareness of AIDS. The School for the Visually Handicapped and Movement for the Intellectually Disabled of Singapore (MINDS) were adopted as charities to support.

Engaging schools was another area given emphasis. Workshops on developing intelligence, emotional, creativity and adversity quotients were conducted for them under the Quest programme. So were the Young Entrepreneurs Challenge and National Entrepreneurship Convention 2004, which saw participation from 52 local and seven overseas schools.



◀ *Inaugural Visionary Award for Dr Wilfred Tang (left) to acknowledge his outstanding contribution to the field of eye care in Singapore.*



▲ *Interesting innovations of the School of Chemical & Life Sciences include the successful cultivation of black tulips in tropical Singapore.*

## School of Chemical & Life Sciences

Students and staff continued to shine with their innovations. At the SPINNOVEX 2005 project exhibition, students showcased interesting creations like black tulips, dietary fibre-enhanced chocolates and an eco-friendly pest repellent. At the Polytechnic Student Research Programme, students from the School won the Best-Three-Projects award.

The top prize in the 2005 Microsoft Office Specialist Challenge for the Microsoft Office Excel category and Merit award for the Microsoft Office Word category went to students of the School.

Staff had their fair share of awards too. For significant contributions to their fields, Dr Wilfred Tang was presented with the inaugural Visionary Award, and Mrs Ngan Mann Na, the SP NOVA Award. At the National Day Awards 2004, Dr Pho Lay Koon and Mr Koh Chuan Aik received the Public Administration Bronze Medal and Commendation Medal respectively. Mrs Koh Siok Im received the Outstanding and Distinguished Service Award from the Ministry of Education.

Academic pursuits such as publication of papers, presentations, industrial attachments and research work helped to keep staff at the cutting edge of technology. Among the presentations given during the year were those at the American Academy of Optometry Meeting and the Asia Pacific Food Expo Conference, and, locally, at the Singapore Guppy Club and Alexandra Hospital.

Several staff went on stints with Schering-Plough Ltd, the Chemical Process Technology Centre, and the LCD Centre in Sweden.

During the year, ties with industry, overseas partners and schools were strengthened. The School conducted courses such as the Advanced Certificate of Performance in Ophthalmic Dispensing and Certificate of Performance in the Theory & Practice of Phlebotomy to meet the needs of companies.

Through links with overseas institutions, students went on industrial training in Australia, China, Thailand, and UK. In addition, eight students from Thailand's Assumption University were here under the Student Exchange Programme.

Of special note was the Introduction to Perfumery course, customised for staff of Handyware (China) Pte Ltd and taught in Guangzhou, China.

The inaugural Chemistry and Drugs course was conducted in May 2004 for GCE 'A' level teachers. Several chemistry courses were also delivered for secondary school teachers.

To facilitate the teaching of the Science of Colour module, a Colour Centre was set up in July 2004, benefiting Optometry and Biomedical Science students.

As part of the School's community outreach, it organised a Chinese New Year visit to the Bukit Batok Home for the Aged and raised funds for the Dover Park Hospice. Overseas community service included an Eyecare Mission to Bintan, Indonesia.



▲ *Popular annual SPELLing Bee contest is one of many activities organised for secondary school students.*

## School of Design & the Environment

Curriculum was revised and updated to enhance the quality of education. One end result was the renaming of the Building & Property Management course as the Diploma in Property Development & Facilities Management. Also, a new Diploma in Landscape Architecture commenced in July 2004.

Talks were organised to add to the students' knowledge in areas such as Architecture in the Eco-Age, Risk Management, and How to Adapt to Changes in Life.

Ties with industry expanded with Memoranda of Cooperation signed with private sector organisations such as Hunter Douglas Singapore Pte Ltd and Ascendas Services Pte Ltd. In addition, staff conducted short courses for industry practitioners on subjects like Occupational Safety and Health, Building Construction and Maintenance, and Engineering Survey with Robotic Total Station and Automated Data Processing, amongst others.

The School hosted a steady stream of overseas visitors, including those from City University Hong Kong and University of Science and Technology of Suzhou, China. On attachment in campus were Dr Viengnaly Mounnarath from Laos' Ministry of Education, and Mr Vu Tien Sy from Vietnam's University of Transport and Communications.

Lecturer Loo Ching Nong and staff from the Kanazawa Institute of Technology jointly submitted a paper on "International Collaborative Project in Engineering Design Education" for the International Conference on Engineering Education 2004.



▲ Carnival on civil and structural engineering course a hit with secondary school students.



▲ Collaboration with industry such as Hunter Douglas Singapore ensures training offered by the School of Design & the Environment remains relevant.



▲ Reaching out to the community, the architecture division puts on display students' creations at the Jurong Regional Library.



▲ Winners of the Green Wave 2004 contest which aimed to promote care for the environment.

During the year, students travelled overseas for community service and industrial training, mainly to China and Vietnam.

To raise its profile, a public exhibition by the Division of Architecture was held at the Jurong Regional Library from 18 to 21 September 2004. A Civil and Structural Engineering Carnival Day was held on 3 April 2004. The School also delivered talks and held courses and careers exhibitions at secondary schools and Institutes of Technical Education. In connection with this, agreements were signed with the Balestier, Bedok and Tampines Institutes of Technical Education.

Achievements were, however, not limited to the classroom. At the Singapore River Raft Race 2005, teams from the School emerged champions in the Open Category and runners-up in the Most Innovative Raft Category. Other wins included the Merit Prize, Commendation Prize and Encouragement Prize at the Sembawang Shipyard Green Wave 2004 Competition.

## School of Electrical & Electronic Engineering

It was a memorable year with the opening of new state-of-the-art facilities, launching of new programmes for students and the winning of numerous awards at international and local competitions.

Memoranda of Cooperation were signed with the Data Storage Institute to develop Micro-electromechanical Systems (MEMS) devices and processes for data storage systems, Attogenix Biosystems Pte Ltd to develop and market blue chips, Fieldbus Foundation, USA, to demonstrate and conduct courses for the Foundation and with the Institute of Technical Education (ITE) College West to conduct cross level training, R&D as well as enrichment programmes.

Outreach programmes organised for secondary school students included the National Junior Solar Sprint Competition held on 1 June 2004 in conjunction with Green Environment Day. More than 80 secondary schools took part. The team from Raffles Girls' Secondary School won in the Fastest Car category.

- ▶ *School of Electrical & Electronic Engineering students score an impressive win at the Singapore Robotic Games including a gold in the Intelligent Robot category.*



- ▶ *Spreading the green message through the National Junior Solar Sprint Competition in which teams from secondary schools race their inventions powered by the sun.*



- ▶ *The Hard-Disk Media Laboratory, a joint effort of the Polytechnic and Data Storage Institute, joins the wide range of facilities in the School of Electrical & Electronic Engineering.*

The School also organised and hosted the 20th National Software Competition on 28 August 2004 to promote IT in secondary schools. The competition was supported by the Infocomm Development Authority and Microsoft.

Two postgraduate students from Turkey and Spain were attached to the Advanced Robotics and Intelligent Control Centre from April to December 2004.

At the same time, two staff, Loh Yew Chiong and Melvyn Oo, went on overseas and industrial attachments respectively.

## School of Info-Communications Technology

To meet the evolving needs of the IT industry, a Game Development option was introduced in the Diploma in Information Technology course.

The new Specialist Diploma in Digital Media Creation was launched in January 2005 to provide students with skills to design and produce digital content and interactive applications.

New facilities were built to support the Diploma in Creative Media Design. These included two fully-equipped Design Studios and a Drawing Studio. For the Diploma in Multimedia Technology, two Macintosh laboratories were added.

Broadening students' horizons were lectures by industry practitioners. They spoke on the growing 3D industry in Singapore, managing intellectual property, and building interactive e-commerce websites.

The first Info-Communications Technology Showcase on 7 July 2004 featured exceptional works by students and a seminar on Securing



▲ Participants from the region attending the Electronic Commerce programme benefit from the expertise and resources of the School of Info-Communications Technology.



▲ School of Info-Communications Technology student, Elaine Lor, a recipient of the inaugural National Infocomm Scholarship.



▲ New studio to support teaching and training.

Insecurity. It aimed to spur students to excel in their work. Several students also had the opportunity to exhibit their animations at the Singapore Arts Festival Outreach Programme's Moving Pictures segment.

Several Diploma in Multimedia Technology students brought honour to the institution. Among them was Soh Yu Ming, who was selected to represent Singapore in the Dare to Be Digital Competition in Scotland, UK in September 2005. Elaine Lor was one of 12 awarded the inaugural National Infocomm Scholarship while Fong Wan Fon won a Diploma of Excellence at WorldSkills Singapore 2004.

Another student Sai Soe Kyaw Thet was awarded the Model Trainee Award by his internship company, Davidson Business Systems, for his dedication and initiative.

Staff were equally outstanding in their achievements. Two of them were awarded the R&D Award 2005 for their role in the Super Computing Cluster for Bioinformatics project.

Mr Venkatesh Rajamanickam's paper on Visual Explainers gained international recognition. It became a required reading material for a core module in the US' University of Washington's Master of Communication in Digital Media programme.

In addition, Ms Lee Huei Hoon designed a series of five stamps for the Singapore Post Special Occasions range. It was the latest of her work, having designed a First Day Cover, stamp booklet with sticker messages and a sheet of 10 stamps in the past.

Continuing to lend its expertise to regional countries, staff conducted two courses, Info-Communications Technology Skills for Government Officials and Electronic Commerce, under the Japan-Singapore Partnership Programme for the 21st Century. The courses were sponsored by the Japan International Cooperation Agency and Singapore's Ministry of Foreign Affairs. Together with participants from the region were those from Africa, Jordan and Papua New Guinea.

Reaching out to the community, several student groups visited the Kaki Bukit Prison School to donate educational materials and conduct workshops.

▶ Another feather in the School of Mechanical & Manufacturing Engineering's cap as Prime Minister Lee Hsien Loong (centre) takes a close look at its robotic chickens during the Lunar New Year Light-up Ceremony at Chinatown.



## School of Mechanical & Manufacturing Engineering

Collaboration with industry and overseas institutions featured prominently during the year.

SIA Engineering Company Ltd sponsored 10 study grants, worth about \$9,000 each, for deserving students in the Diploma in Aeronautical Engineering and Diploma in Aerospace Electronics courses.

Two consultancy projects for industry on Hex Reef Fabrication and Forming Punches for Turbine Blade Covers were concluded by April 2004. Also completed was a Local Enterprise Technical Assistance Scheme (LETAS) consultancy project, Design of Security System, for IDLINK Pte Ltd.

Seminars organised jointly with industry included Cavity Pressure Measurement with Kistler (SEA) Pte Ltd on 24 November 2004 and Advanced Materials Preparation, Colour Etching and Microhardness Testing with ASM International (Singapore Chapter) and Microactive Scientific (S) Pte Ltd on 5 April 2004.



▶ Director of the School of Mechanical & Manufacturing Engineering Mr Ong Eng Chan (left) receiving the Occupational Health Best Practices Award for project to cut down noise level from metal rod cutter.



▶ Excellent performance by Abdul Khair bin Abdul Jabar, a Diploma in Aeronautical Engineering student, at the WorldSkills Singapore competition, winning the gold medal in the Computer Numerical Control Turning category.

A Letter of Exchange was also signed with UK's University of Glasgow to enable graduates to gain direct entry into second year for certain degree and Masters programmes.

Accolades for the School included the Occupational Health Best Practices Award from the Ministry of Manpower and a Silver Award from the Institution of Engineers (IES) for its One-hand Drive Wheelchair for Hemiplegic Patients project. Students also won a gold medal in the Computer Numerical Control Turning category and a Diploma in the Computer Numerical Control Milling category of the WorldSkills Singapore contest.

Together with the School of Electrical & Electronic Engineering, the first prototype of a humanoid robot was completed. Staff and students also worked on developing several robotic chickens which were the centre of attraction at the Chinatown Lunar New Year Light-up.



▲ State-of-the-art Navigation Simulator a boost to training in navigation and bridge procedures.

## Singapore Maritime Academy

Giving the Academy's prestige a further boost was the award of the Productivity and Standards Board's Quality Maritime Education and Training 100:2002 Certificate for Design and Provision of Marine and Maritime Related Training Courses on 1 November 2004. The certification fulfilled both ISO 9001:2000 as well as the International Maritime Organisation's Standards of Training, Certification and Watchkeeping for Seafarers 95 requirements.

Another significant development was the signing of the Memorandum of Cooperation with the Academy of Maritime Education and Training, Chennai, India. The scope of the agreement included the establishment of twinning programmes, joint R&D, and a staff exchange programme.

Five lecturers from UK's Universities of Glasgow and Strathclyde shared their knowledge with the first cohort of Specialist Diploma in Marine Engineering & Naval Architecture students.



▲ Quality education in the Academy with certification from the Productivity and Standards Board.



◀ Annual SMA Day provides opportunity for staff, students and their families to strengthen bonds.

To support teaching and learning, several training facilities were upgraded during the year. The Navigation Simulator was reconstructed to Class A - Full Visuals specifications, with the Horizontal Field of View increased from 210° to 240°. The upgrading allowed the simulator to be deployed for more programmes and proved to be very effective in the training of navigation and bridge procedures.

An Electronic Navigation Centre complete with Electronic Chart and Display Information Systems equipment was set up to give students a state-of-the-art learning environment. The centre comprised an instructor station connected to 10 workstations, each simulating a ship's bridge.

Three scholarships were added to further encourage talents to join the maritime industry: the Tripartite Maritime Scholarship; the Seafaring Alternative - An Investment for Life Scholarship; and the Association of Singapore Marine Industries Scholarship.

Staff actively participated in workshops and seminars which were part of an EU-ASEAN project aimed at contributing to human resource development in maritime education institutions in Europe and the Asia-Pacific. It was coordinated by the Seafarers' International Research Centre at the University of Wales, UK.

The Singapore Maritime Academy Day on 1 October 2004 for staff, students and their families was held at Labrador Park where the Nautical Studies Department campus was once located.

► The only one of its kind in a local educational institution the SP Dover contributes to quality training in the Academy.

