PRESS RELEASE

RECONFIGURING THE ENGINEERING DNA

Ngee Ann in strategic affiliation with NTU for new diploma to groom
a new breed of engineering talent

Singapore, 24 Nov 2010 – Ngee Ann Polytechnic (NP) has embarked on a strategic affiliation with Nanyang Technological University (NTU) to reshape the way engineering is taught at the diploma level.

The move has paved the way for a new Diploma in Engineering Science (ES) in the next Academic Year which begins in April 2011. Targeted at academically-strong students, including those who are university-bound, this new diploma will produce a distinctive class of engineering graduates with a broad-based perspective in engineering and strong technological skills. These graduates will be equipped with a solid grounding to excel in an undergraduate engineering education and become outstanding engineers.

A premier engineering diploma, it is aimed at students who are strong in Mathematics and Science. The curriculum has been designed to give them a leg up in pursuing degrees either at NTU or other universities, including a more seamless dovetailing into the undergraduate curriculum.

“The Engineering Science course is groundbreaking. This is the first engineering diploma in Singapore to break the traditional mould of being highly discipline-specific. Thanks to the involvement and guidance of NTU in the curriculum design, the diploma offers a broader coverage of engineering disciplines and exposes students early to undergraduate engineering education at NTU. They will also get a taste of engineering education in selected universities in China and Japan. Students will therefore learn engineering in a whole new way and have a head start in preparing for exciting engineering careers. With NTU’s invaluable feedback and
mentorship of our students in their final-year projects, we can raise the bar and reshape the way engineering is taught,” said Mr Chia Mia Chiang, the Principal of Ngee Ann Polytechnic.

While the study of engineering is traditionally anchored on the specific types of discipline such as civil, mechanical or electrical engineering, the ES course is designed differently to lay a broad foundation in engineering from Year 1 by equipping students with engineering and applied science fundamentals. Students will then gain in-depth knowledge in a wide range of engineering fields before moving on to acquire competencies in different technology areas. They will acquire a multidisciplinary mindset, thus enabling them to examine engineering issues from different perspectives.

Professor Pan Tso-Chien, Dean, College of Engineering at NTU, said: “Engineering is the bedrock of NTU and we have the largest engineering college in the world. It is in our interest to raise the standard of engineering and to help attract young talents to study engineering in Singapore. Although NTU does not offer any diploma-level engineering courses, we are most willing to share our expertise with Ngee Ann Polytechnic to design an engineering course that will produce engineers with strong technological skills and to mentor their students in their project work.”

The new course will also appeal to students from the School of Science and Technology, Singapore (SST) with a keen interest in applied science and technology and may choose to pursue careers in engineering. For these students, an ES diploma at Ngee Ann Polytechnic followed by an undergraduate degree at NTU or other universities can be a compelling pathway to become top-notch engineers.

An MOU was signed by Ngee Ann Polytechnic, NTU and SST last year to explore ways to collaborate and create progression pathways for SST students. In the collaboration to design the new ES diploma, Ngee Ann Polytechnic and NTU have ensured that this new diploma will be in line with the spirit of the MOU.

**Curriculum for the New Engineering Science Course**

ES students will spend two days a week in their final year in NTU to undertake projects in areas such as material sciences, aerospace engineering and integrated circuit design. Their project work will be supervised by NTU professors.

This early first-hand experience in Research & Development, even before enrolling at a university, will be a key feature of the course. The exposure to challenging practical problems will fire students’ imagination and sow the seeds of innovation.

To provide an all-rounded education, ES students will also study Marketing Fundamentals and Fundamentals of Financial Management, to enhance their understanding of the business aspects.
Another unique feature of the ES course will see students taking on off-campus learning in a substantial way through collaborations with key industry players. These include the Institute of Bioengineering and Nanotechnology, Eurocopter SEA Pte Ltd, and SingTel Broadcast Information Centre.

Overseas exposure will also feature prominently in the ES course. For example, students will go on study visits to top universities such as Chiba University in Japan and Zhejiang University and Tianjin University in China for first-hand exposure to their innovation and enterprise culture and latest technological developments.

In addition, students will go on overseas internships at renowned research institutes such as the Shanghai Jiao Tong University in China.

The above learning platforms will be complemented by R&D projects in Ngee Ann Polytechnic’s technology centres and laboratories such as the Solar Technology Centre, Alpha Centre for Robotics and Intelligent Systems and Biomedical Engineering Centre, as well as NP’s Centres of Innovation in Environmental & Water Technology and Marine & Offshore Technology.

The polytechnic will also set up a new Engineering Science Centre to support the ES programme. Facilities at the centre include two laboratories for engineering design practices and projects, as well as a project development room.

**Scholarships**

Ten new prestigious engineering scholarships awarded by Ngee Ann Polytechnic await the first batch of ES students next year.

With an initial intake of 40 students, this means that one in four students in the ES course will be offered an NP Engineering Scholarship. The scholarship holders will be invited to join The Christieara Programme, Ngee Ann Polytechnic’s very own talent development programme\(^1\).

Each Engineering Scholarship is worth more than $20,000, including tuition fees for the three-year duration of the course, a one-time notebook allowance of $1,200, and participation in The Christieara Programme.

\(^1\) The Christieara Programme is a talent development programme designed for high-performing NP students to maximize their potential and groom them for leadership positions.
Graduate Outcomes

With the new Engineering Science diploma course, Ngee Ann Polytechnic is confident of producing outstanding engineering talents who will emulate the success of NP’s illustrious engineering alumni such as the ones below:

- **Tan Jun Liang**, a 2010 graduate of NP’s Aerospace Technology course, was awarded the PSC Overseas Merit Scholarship (Open) this year.

- **Low Hong Wei**, a 2010 graduate from NP’s Chemical & Biomolecular Engineering course, was awarded the PSC Singapore Government Scholarship (Open) this year.

- **Jamin Teo**, a 2003 graduate from NP’s Electronic & Telecommunication Engineering course, went on to earn a Master of Engineering (First Class Honours) from Imperial College London. Now based in London, Jamin is working as a technologist at Goldman Sachs.

- **Shaan Akhtar**, a 2004 graduate from NP’s Mechatronic Engineering course, graduated with first-class honours in Aerospace Engineering from the University of New South Wales. He bagged two awards for his final-year design project. He is now an engineer at Pratt & Whitney.

- **Adrian Liew Chong Boon**, a 2004 graduate from NP’s Electronic & Computer Engineering course, was awarded the Defence Science and Technology Agency Undergraduate Scholarship to study in NTU. Adrian graduated this year with first class honours in Computer Engineering and won the Lee Kuan Yew Gold Medal and Koh Boon Hwee’s Scholars Award. He is now a project engineer at DSTA.

- **Lieutenant Colonel Chew Chun Liang** and his twin, **Major Chew Chun Chau**, graduated from Ngee Ann Polytechnic’s Electronic & Computer Engineering course in 1996. They both obtained first-class honours in Electrical and Electronic Engineering from the Imperial College London. Lieutenant Colonel Chew is now the Commanding Officer of RSS Stalwart, while Major Chew is an Operations Manager at the Navy.

Notes to Editors

About Ngee Ann Polytechnic

Ngee Ann Polytechnic is one of Singapore’s leading institutions of higher learning, with about 16,000 full-time students, about 4,800 part-time students and a vibrant alumni community of more than 100,000. The polytechnic offers 49 full-time diplomas in diverse areas such as business, engineering, sciences, infocomm technology, media and humanities, and a wide range of part-time programmes.
The polytechnic aims to provide relevant, balanced and value-added curricula by creating an effective teaching and learning environment. As the first polytechnic in Singapore to introduce interdisciplinary studies to students, Ngee Ann pioneered a broad-based and multi-disciplinary approach to learning.

It was the first polytechnic in Singapore to launch Mobile e-Learning (MeL) in 1999, integrating a notebook ownership scheme, a wireless campus network and an e-learning platform. The entire polytechnic is now fully enabled for students to connect to the wireless network. About 95% of all the teaching modules are now available online.

Ngee Ann was also the first to partner an overseas educational institution to offer a degree under the Ministry of Education’s Polytechnic-Foreign Specialised Institution collaboration framework. Another key thrust for the polytechnic is forging partnerships with industry and research partners to enrich students' learning journey and keep them up-to-date with market practices. For more information, please visit www.np.edu.sg

About Nanyang Technological University (NTU)

A research-intensive university, NTU has 33,000 undergraduate and postgraduate students in the four colleges of Engineering, Business, Science and Humanities, Art & Social Sciences.

The largest campus in Singapore, it is also home to four world-class institutes – the S Rajaratnam School of International Studies, the National Institute of Education, the Earth Observatory of Singapore and the Singapore Centre on Life Sciences Engineering, besides leading research centres such as the Nanyang Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

A fast-growing university with an international outlook, NTU is putting its global stamp on Five Peaks of Excellence -- Sustainable Earth, Future Healthcare, New Media, New Silk Road and Innovation Asia. In 2013, NTU will set up a medical school in Singapore jointly with Imperial College London. It will also have its first campus in China, the NTU Tianjin College.

For more information, visit www.ntu.edu.sg

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