

# Fresh push to produce 'engineers of tomorrow'

## Universities need to help meet demand for knowledge-based grads: panel

[SINGAPORE] Singapore's university sector will see renewed efforts to boost its research and development (R&D) capabilities, in the hopes of producing the new engineer graduate of tomorrow.

In its preliminary report, the Committee on the Expansion of the University Sector (CEUS) highlighted that because of the growing demand for knowledge-based graduates, universities here have to expand their research prowess.

"Increasingly, the economy demands graduates with broader skills and knowledge. There is a real need for more people who don't just have specific strengths in traditional disciplines, but are able to synthesise knowledge from all

over," said Senior Minister of State for Education Lui Tuck Yew.

Underpinning the committee's work is the desire for a more inter-disciplinary approach to education. But engineering still remains the launching grounds for these tertiary academic partnerships.

The report supports the National University of Singapore's (NUS) moves to launch two engineering flagship programmes in 2011, one which will train students in multiple scientific realms so that they can be trail-blazers in science and engineering; the other to couple engineering with training in design, management and systems.

Nanyang Technological University (NTU) will offer a slightly differentiated track with its Premier Engineering Programme (PEP) where participants will gain a direct master's degree in engineering. The PEP curriculum, which will

start in 2009, will be similarly broad-based.

This focus on research and engineering has not been neglected in the new publicly funded university that looks set to open its doors by 2015.

The new university will offer three disciplines for students to select and combine to their choice. One of the offerings is engineering and applied sciences.

When asked why this renewed commitment to an engineering route, the various committee members cited an engineer's keen brain for analysis as a marketable and adaptable commodity.

"For today's knowledge-based society, we need to produce the engineer of tomorrow. One that not only has the analytical skill but who is diverse and has diverse knowledge," said Bertil Andersson, provost of NTU. He cites how engineers are usually highly sought after by banks be-

cause of their renowned problem-solving skill.

Furthermore, those who view finance and business as unrelated to engineering, should not be so quick to write off an engineering degree.

Permanent Secretary for the Ministry of Education Tan Ching Yee highlighted that emerging industries tended to be science and technological ones and even financial products have been developed by rocket scientists and mathematicians.

Ultimately, the focus of the committee is to deliver employable Singaporeans, no matter what area they were schooled in.

It has endorsed Singapore Management University's plans to expand its selection of courses to include International Relations and Maritime Business Economics, recognising the bankability of other fields in the job market.

That is why it also suggested a liberal arts college

to be set up under the NUS umbrella.

In such a college, undergraduates are trained in the humanities, social sciences, natural sciences and mathematics, disciplines commonly dismissed by Singaporeans as unmarketable.

"I believe that an employer would be on the lookout for people who not only have very specific knowledge, but also the ability to synthesise information from all fields, which is what a liberal arts education can offer," said RADM Lui.

In the coming days, the report will be examined and plans will change as the ministry's International Academic Advisory Panel convenes to discuss its suggestions.

Come July, the CEUS will pass on a finalised version to the government for further deliberation.

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