NTU curriculum makeover to include more course flexibility

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SINGAPORE — More choice and flexibility in course electives. Fewer hours in the classroom.

These are among the elements of the Nanyang Technological University's (NTU) revamped curriculum structure, which will apply to all incoming freshmen this year.

More students will also get the chance to spend time overseas for exchanges with partner universities or internships.

Currently about 50 per cent of students do so; the new target is 70 per cent.

There is some element of cross-faculty study at NTU, with, for instance, engineering students spending about 25 per cent of curriculum time on electives. But under the new structure, that will be expanded, to at least 30 per cent and up to 45 per cent of curriculum time.

These include new options in Liberal Studies, as well as a compulsory course in Environmental Sustainability, on top of about 800 electives already available.

NTU is also introducing a new Renaissance Engineering Programme which melds engineering with business management modules.

The aim, it says, is to “groom an exclusive breed of engineering leaders into future chief executive officers and chief technology officers”.

It will also start two new double degrees in Business and Computer Engineering, and Business and Computer Science.

Professor Er Meng Hwa, the Senior Associate Provost overseeing undergraduate education, said on average, a student may end up taking three or four fewer modules across his four years at NTU.

“Even though there’s a reduction in terms of contact hours, it doesn’t mean there’s a dilution in terms of the learning experience …”

Instead, more time will be devoted to independent study and group learning.

Teaching methods will have to change too — with greater use of IT, and smaller class sizes.

NTU’s incoming President and Provost, Professor Bertil Andersson said: “The world is becoming more globalised, more multicultural, more inter-disciplinary”.

“… We need to go from Gutenberg to Gates,” he added, referring to the need for lecturers to embrace the shift in technology from the printing press to computers.

But for learning to change, the whole campus environment must change too. New classrooms will facilitate student-lecturer exchange and group discussions.

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Senior Associate Provost overseeing undergraduate education
Professor Er Meng Hwa

Professor Andersson said that while faculty acknowledge the need to move away from lecture-style teaching methods, some have expressed reservations how they will balance teaching with research requirements.

It will be a “management challenge” to get them on board but he noted that a younger generation of professors are more open to new pedagogies and technologies.

“I would think that when this is through, this is actually going to be attractive for faculty to come to NTU, a university that is research-intensive and at the same time, have a modern teaching and learning philosophy,” said Prof Andersson.