



Nanyang Technological University's new core curriculum for undergraduates comprises seven modules covering topics such as digital literacy, global challenges, and communication and inquiry. The modules will make up about a fifth of their overall academic workload. ST PHOTO: JASON QUAH

NTU rolls out new core curriculum for freshmen

Interdisciplinary skills will be focus in effort to prepare students for changing workforce

Amelia Teng
Education Correspondent

Freshmen joining Nanyang Technological University (NTU) in the new academic year in August will take up a new common curriculum that spans a variety of subjects.

They will also need to complete internships in order to graduate.

These are among the initiatives that NTU laid out yesterday – as part of its plans for the next five

years – to better prepare students for a changing workforce.

The core curriculum, which emphasises interdisciplinary skills, comprises seven modules covering topics such as digital literacy, communication and inquiry, ethics and global challenges.

The aim is to help students make connections between disciplines and prepare them for a world where complex challenges need to be tackled from different angles.

The revamped curriculum starts with the 6,000 freshmen joining NTU in August – except those

studying medicine and those at the National Institute of Education.

The modules, which students will take across their first two years, make up about a fifth of the overall academic workload.

Higher learning institutions have been making a greater push for students to see connections across disciplines.

In August, the National University of Singapore will enrol first-year students into its new College of Humanities and Sciences, marking a shift from the traditional way of learning in separate disciplines.

Speaking to The Straits Times, NTU president Subra Suresh said that with the overhaul of the core curriculum, undergraduates will take classes alongside peers from

SERENDIPITOUS ENCOUNTERS

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NTU PRESIDENT SUBRA SURESH

other disciplines and listen to a wider range of faculty members.

He cited the example of an engineering or computer science student who would naturally have computer literacy and coding expertise. But he would also need to understand softer aspects of technology, such as the ethics of computing, as well as privacy and confidentiality.

"An arts student will get to see a professor from mathematics, who will talk about data privacy... or may get an opportunity to meet and talk to an economics professor from the business school or somebody who does blockchain," said Professor Suresh.

"So it's these kinds of serendipitous encounters that we want to foster at the undergraduate level."

The university degree that today's undergraduates leave with must be relevant to the changing times – it cannot be the same as that of the generations that came before them, added Prof Suresh.

"(Graduates) are going to have five to six decades of career where they have to not only continually change jobs – it's inevitable that they're also going to continually change professions."

NTU will also widen its interdisciplinary offerings, with a new undergraduate major in economics and data science from August, as well as higher degree programmes in areas like neuroscience.

The increasing focus on interdisciplinarity also extends to staff, said Prof Suresh.

NTU, which currently has some 1,450 faculty members, will in the next five years create joint positions across schools for existing and new staff.

"(This will impact) how we look at tenure, how we look at promotion, how we reward (faculty), how we recognise their achievements," said Prof Suresh, noting that NTU has adopted broader evaluation methods in recent years.

"The criteria is much more holistic than numerical KPIs (key performance indicators), how many papers you published. Ultimately, impact is what we care about, and impact can be defined in many different ways," he said.

"If you are a computer science professor and you haven't published something, but you've written a code that Facebook and Google and WeChat and all of these (companies) use... it's impact."

NTU hopes to give faculty "the freedom to move around in a much broader space", he said. "If we allow them to do that, they'll be much better teachers."

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New NTU students must work as interns

Internships will be made compulsory from August for all new students at Nanyang Technological University (NTU).

They will need to complete work stints from their second year that will count towards their graduation requirement. Students can complete them locally or overseas, and their work performance will be assessed.

Internships will also be an option for graduate students.

Currently, only some schools in NTU have such mandatory internships. These are the six engineering schools, the School of Biological Sciences, Nanyang Business School, the School of Art, Design and Media, and Wee Kim Wee School of Communication and Information.

NTU said that about three in 10 of such stints – which vary from 10 to 20 weeks or longer – were converted into full-time job offers.

Four more schools will require internships from August: Asian School of the Environment, School of Physical and Mathematical Sciences, School of Social Sciences and School of Humanities.

Other institutions, such as Singapore Management University and Singapore University of Technology and Design, have already made internships compulsory for all students.

Internships are also a requirement for some National University of Singapore students, including those from engineering and computing.

NTU president Subra Suresh said the university is exploring ways to open up industry connections that it already has to students.

This could come, for instance, through research internships at NTU's corporate laboratories that are jointly set up on campus with industry partners such as HP, Rolls-Royce, Singtel and ST Engineering.

There are 10 such labs, which generate new products and services through developing new technologies.

Continuing education is another area that NTU is developing, as it expands courses for fresh graduates and adult learners to help them keep pace with work demands.

It has 39 MiniMasters certificates – which are micro-credentials – in areas like early childhood education, business analytics and construction management.

The course credits earned from this programme may count towards a full master's degree, which can be pursued later.

NTU is also looking to strengthen teaching and learning practices across the university. It is setting up an Institute for Pedagogical Innovation, Research and Excellence that will focus on a number of areas, including innovations like online learning and continuing education.

Other initiatives under its NTU 2025 plan unveiled yesterday are a new university well-being office that will, from April, provide support for employees and students. With mental health as a priority, the office aims to ensure timely intervention and improve counselling services, among other things.

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Internships help them bag full-time jobs



NTU graduate Pek Jia Wei started working full-time at Nestle last July. She had interned at the F&B firm for three months in 2019. PHOTO: NESTLE SINGAPORE

University students are grabbing work stints in the hope of beefing up their portfolios and securing jobs after graduation.

During her three-year course at Nanyang Technological University (NTU), accountancy graduate Pek Jia Wei completed three internships. She received full-time job offers from two firms she had interned with.

"It's very common to take up more than one internship, because you will lose out if you don't," she said. "I come from a junior college background, so it's really important to have work experiences. Otherwise, it's hard to give employers examples of your strengths."

Ms Pek, 21, accepted a management trainee position with Nestle and started working full-time with the food and beverage firm last July.

"I really enjoy the company culture; there's a lot of guidance given, so I know this is a good place to learn," she said. "The internship let me branch out of accountancy and try marketing, which turned out to be my passion."

During her three-month internship with Nestle in 2019, she was tasked with conceptualising and bringing to market a promotional pack for its Maggi cup pasta product. "There's a sense of satisfaction seeing your product and hard work in the market," she said.

"I also learnt project management, including budgeting and timeline, which you can't really learn in school as it's a more controlled environment."

"I count myself fortunate that I got my job from interning before Covid-19 hit. It's possible that if I didn't intern, I would still be out of a job."

Another accountancy graduate, Kenneth Kwek, 24, also did three internships while at NTU, with the last 10-week stint turning into a full-time job at PwC Singapore's deals strategy department.

In fact, he was offered the job in late 2019, even before graduating.

"I did consider other job opportunities, but I knew I wanted to come back to PwC for various reasons, including its strong coaching culture."



Before graduating from NTU, Mr Kenneth Kwek was offered a job at PwC Singapore, where he had done an internship. PHOTO: COURTESY OF KENNETH KWEK

"I'm also being exposed to different industries and learning at a very fast pace."

"The job came at the right time, and with the Covid-19 situation last year, I'm glad that the firm didn't rescind the offer."

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