

New NUS botany programme aims to increase number of plant experts here

It comes amid wider decline in such courses and as Singapore opens more green spaces

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A new undergraduate minor programme in botany offered by the National University of Singapore (NUS) aims to increase the number of local flora experts here as the Republic opens more green spaces and conserves more threatened native species.

The minor in botany, which starts in the next academic year in August 2023, is jointly developed by the university and the National Parks Board (NParks) amid a worldwide decline in plant experts, and botany courses in educational institutions.

“We are highly dependent on plants. But due to the lack of training and education in plant biodiversity, more are interested in animals – living things that move – rather than in plants,” said Dr Amy Choong, senior lecturer at the NUS Department of Biological Sciences, who is coordinating the minor at the university.

The minor programme comprises nine existing classes related to the study of plant and fungal biology, horticulture and the region’s biodiversity. Students need to take and pass five of those classes to be certified with the minor.

Students from all faculties qualify for the undergraduate programme as long as they have passed A-level H2 biology or have taken a foundation class in NUS called general biology.

While the new programme comprises classes that are already available in NUS, the minor certifi-

cation will help to augment graduates’ specialisation in botany.

The specialised knowledge will be an asset to students keen to work in this area, said Dr Chong Kwek Yan, a senior researcher at the Singapore Botanic Gardens.

“When an employer scans through a student’s degree transcript and sees the minor (certification), it signals that the student had taken classes relevant to this specialised field and has the passion and knowledge for botany,” said Dr Chong, who also teaches “Vegetation and plant diversity of South-east Asia”, an existing class that will be made compulsory in the new programme.

Singapore aims to add about 200ha of nature parks and start species recovery for 100 more plant species by 2030, said NParks in March.

Urban farming is also gaining ground here to help boost food security, and plant experts are in demand at high-tech farms.

An employer at a local indoor farm previously told *The Straits Times* that he was looking for an experienced agronomist – an expert in crop production and soil management.

While identifying plants, especially those that are threatened or previously assumed to be extinct, is a key skill expected of plant and environment experts, such expertise here is scarce.

Dr Chong said many environment consultants and people who do biodiversity surveys can recognise fauna, but are not as adept in identifying plants.



NUS students taking a practical exam at the Singapore Botanic Gardens. While identifying plants is a key skill expected of plant and environment experts, such expertise here is scarce. PHOTO: NUS

This becomes a hurdle when consultants are tasked to assess how urban development would impact the vegetation and later have to decide on mitigating measures, he added.

NUS’ Dr Choong also pointed to the global problem of “plant blindness” – the tendency to overlook and underappreciate the flora in one’s surroundings.

logical Sciences. From 2003, the botany major was no longer offered.

Dr Choong and Dr Chong hope that botany education will be given greater prominence here.

In her tropical horticulture classes, Dr Choong’s students learn to grow and nourish Chinese mustard while fending off pests and weeds, skills that are relevant for careers in urban farming.

Dr Chong’s lessons, conducted at the Singapore Botanic Gardens, involve visits to the fernery – or a garden for ferns – ginger garden and herbarium to see how plant specimens are preserved for research. Students also go on field trips to learn how to identify plants in forested areas such as the Central Catchment Nature Reserve.

Life sciences student Lim Yi He, who has taken many botany classes in NUS, is glad that the university will offer the minor because it highlights the importance of studying plants.

The 23-year-old added: “The minor will benefit many of my juniors who wish to pursue a botany-related career. I hope the new programme will encourage students to

give botany a chance.”

Ms Lim, who will graduate soon, has been offered a botany-related job.

Birdlife International’s Asia forest programme coordinator Lahiru Wijedasa is among a handful of botany experts based here. He graduated with a life sciences major in the early 2000s before going to the University of Edinburgh to pursue a master’s degree in botany in 2010.

While studying life sciences, Dr Lahiru was more attracted to living things that move, like fishes.

“I originally thought plants were boring. Then one day, an arborist took me to look at a tree and he interpreted the body language of trees. It opened my eyes to plants and I never looked back,” he said.

“Ecosystems are important in meeting everyone’s daily food and environment needs, and also in fighting climate change. The new minor at NUS is great as it sets the groundwork for students to later dive deeper into growing fields that involve plants and restoring ecosystems,” he added.

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