NEWS RELEASE

Singapore, 21 February 2022

NTU Singapore launches three new academic offerings on sustainability, and quantum and blockchain technologies

Nanyang Technological University, Singapore (NTU Singapore) is launching three academic offerings in the new academic year beginning in August to prepare students for a career in the sustainability sector as Singapore transitions to a green economy, as well as in the fast-developing fields of blockchain and quantum technologies.

NTU Singapore's new **Second Major in Sustainability**, open to students enrolled in any single-major degree programme, will equip students with the foundation and practical tools for understanding the concepts of sustainability and applying them to real-world scenarios, and allow them benefit from the job opportunities in this field as the nation pursues its sustainability goals.

For Physics and Applied Physics undergraduates, NTU is also launching a **Second Major in Quantum Technologies** to prepare students for postgraduate work in the fledgling quantum industry, as quantum technologies move rapidly from research into development and commercialisation.

NTU is also offering the **Master of Science in Blockchain Technology**, a first in Singapore and the Asia Pacific. The postgraduate programme focuses on blockchain technologies and their innovative applications across various sectors, from finance and banking to energy and health care.

NTU Acting President, Deputy President and Provost Professor Ling San said: "We live in a time where complex issues like climate change are considered not just from an environmental perspective, but also in terms of social justice, economic development, technological adaptation, and political will. Our new **Second Major in Sustainability** will allow our students to pursue a plethora of job opportunities in the sustainability sector as Singapore transitions to a green economy.

"Another rapidly developing field is in quantum technologies, where research is moving into commercialisation, and where physicists will play a vital role in developing these game-changing technologies of the future. The new **Second Major in Quantum**

Technologies will allow students to build on their training in Physics or Applied Physics with additional courses in new and emerging quantum technologies, allowing them to develop a deeper appreciation for the latest developments in this field.

“Some of the courses under these new Second Majors are highly interdisciplinary in nature and encourage students to understand this highly scientific fields from the science, engineering, humanities, and social science perspectives. This is aligned with NTU’s interdisciplinary approach to education, as articulated in NTU 2025, the University’s five-year strategic plan.”

On the new **Master of Science in Blockchain Technology** programme, **Prof Ling** said: “Given our reliance on data in today’s global economy, ensuring security, confidentiality, and integrity of data has become a necessity in governments and organisations. Blockchain technology has the potential to offer digital trust infrastructure and solutions. The new Master’s programme in Blockchain Technology will enable NTU to build a ready pool of talent who can contribute to blockchain R&D in Singapore. It also leverages the University’s strong ties with industry partners such as Algorand Foundation, the world's most green and secure blockchain ecosystem.”

Second Major in Sustainability

In line with NTU’s **interdisciplinary approach** to education, the **Second Major in Sustainability** incorporates relevant courses across NTU’s Colleges of Science, Engineering, and Humanities and Social Sciences, and the Nanyang Business School.

Open to all students enrolled in single-major degree programmes, it aims to prepare students for positions related to sustainability, from creating sustainability initiatives to reporting on corporate social responsibility progress.

The Second Major will be structured according to the three traditional pillars of sustainability – Society, Environment and Economy – to give students good theoretical grounding behind why environmental problems occur, and how social interaction and economic development affect ecological processes. Modules will cover such topics as climate change, pollution, ethics, and the impact of urbanisation.

Students will then apply this knowledge through modules in two additional pillars of Practice and Policy, which focus on how foundational knowledge can be applied in the real world, including in engineering principles and monitoring, energy, environmental social governance (ESG) reporting, and in the UN Sustainability Development Goals.

There are also advanced electives that allow students to tailor their Second Major to their career options.

Second Major in Quantum Technologies

The new Second Major in Quantum Technologies builds on the Physics and Applied Physics degree programmes, which lay the foundation for understanding quantum technologies.

Through this Second Major, selected first-year Physics and Applied Physics students can keep up to date with several emerging quantum technologies, including quantum information processing, quantum communications, and quantum sensing.

Some courses under this new Second Major will make connections across science and humanities.

For instance, the first-year course *From Quantum Mysteries to Quantum Technologies'* teaches students to ask fundamental questions of quantum science, as well as questions from social and technological perspectives as these technologies become embedded in society.

Master of Science in Blockchain Technology

The new Master of Science programme in Blockchain Technology is offered by the NTU Centre in Computational Technologies for Finance, which is co-led by the University's College of Engineering and Nanyang Business School.

It comes at a time when the Singapore government is focused on shaping the country to become a hub for blockchain research and commercialisation. In 2020, the $12 million Singapore Blockchain Innovation Programme was launched to strengthen the country's blockchain ecosystem.

The one-year full-time (or two-year part-time) programme is open to those with a good honours degree in computer-related majors. Those with a good bachelor's degree in other disciplines and have two years of computer programming job experience may also apply.

Students enrolled in this programme can embark on a one-year capstone project to develop their own blockchain application, complete with a business and legal analysis. The project will be co-supervised by industry experts.

Upon graduation, students can embark on careers such as blockchain developers, blockchain project managers, blockchain user experience designers, blockchain security professionals, and blockchain solutions architects.

Application for the programme is now open and will close in end April 2023. For more information, visit: https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-blockchain

END

Media contact:

Foo Jie Ying
Manager, Corporate Communications Office
Nanyang Technological University
Email: jieying@ntu.edu.sg

About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the Engineering, Business, Science, Medicine, Humanities, Arts, & Social Sciences, and Graduate colleges.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

Ranked amongst the world's top universities, the University's main campus is also frequently listed among the world's most beautiful. Known for its sustainability, over 95% of its building projects are certified Green Mark Platinum. Apart from its main campus, NTU also has a medical campus in Novena, Singapore's healthcare district.

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