



NEWS RELEASE

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NTU Singapore to establish a new joint school of Science and Engineering

Nanyang Technological University, Singapore (NTU Singapore) today announced the establishment of a new academic unit – the **School of Chemistry, Chemical Engineering and Biotechnology (CCEB)** – with effect from August 2022.

The new interdisciplinary school is the first to be set up jointly by the Colleges of Engineering and Science and is also the first to be established between any two Colleges within NTU.

The creation of the new School is aligned with the vision articulated in the NTU 2025 strategic plan to foster stronger interdisciplinary synergies across academic units in education, research, and innovation, while also ensuring depth and rigour in the coverage of topics within the disciplines.

Core academic areas such as chemistry, chemical engineering and biotechnology provide the foundation for a wide variety of intellectual domains that encompass different areas of engineering, science and medicine. They also support a range of industries whose products and services touch every aspect of modern life.

The School of CCEB is formed by integrating the **Division of Chemistry and Biological Chemistry** in the **School of Physical and Mathematical Sciences (SPMS)** with the **School of Chemical and Biomedical Engineering (SCBE)**. The former is currently housed in the College of Science, whereas the latter is presently one of the academic units within the College of Engineering.

The new joint school is also expected to further strengthen the national and global impact of NTU's educational programmes, scientific research, and innovation in the subject areas of Chemical Engineering and Chemistry. NTU's Chemical Engineering is ranked 6th in the world in the 2021 Quacquarelli Symonds (QS) World University Subject Rankings, while Chemistry is placed 8th.

Addressing some of the most pressing and complex challenges facing humanity inevitably calls for strong interdisciplinary approaches in pedagogy and research. Nurturing greater synergies among academic units is one of the key aspirations of the NTU 2025 strategic plan. The new school aims to respond to this goal by fostering a tighter coupling between basic sciences and their engineering applications, thereby providing a more comprehensive and holistic educational experience for students.

Professor Subra Suresh, NTU President, said, “The formation of the new School of Chemistry, Chemical Engineering and Biotechnology is yet another example of the University’s commitment, through our NTU 2025 strategic plan, to better prepare students for the opportunities and challenges facing industry and society. The synergies established by the new school across scientific disciplines and engineering practice would not only benefit education and research, but they would also accelerate innovation in overlapping areas such as food technologies, materials engineering, health sciences, and medicine.”

Building on cross-college collaborations

The School of CCEB is the latest initiative to be launched as part of the NTU 2025 strategic plan to strengthen interdisciplinary education. In August, NTU introduced a university-wide **interdisciplinary common core curriculum for all first-year undergraduate** students, covering topics such as digital literacy, communication and inquiry, ethics, and global challenges.

NTU has also planned for several interdisciplinary faculty appointments over the next five years across colleges and schools, and for strategic growth areas such as food technologies and food security, which are also topics of education and research in the new School of CCEB.

The new school, to be jointly overseen by the Colleges of Science and Engineering, will be helmed by a new Chair, who will be appointed through a global search.

The new School is well positioned to significantly strengthen many existing synergies among the constituent academic entities, such as degree programmes that cover common second majors. They include Business, Economics, Food Science & Technology, and newly launched offerings in International Trading, and Entrepreneurship (see *Annex*).

Professor Ling San, NTU Deputy President and Provost, said, “The new school will be a cross-college school which is strongly aligned with NTU’s goal to develop interdisciplinary curricula for undergraduate and postgraduate degree programmes, as well as for Continuing Education and Training. It will advance NTU’s international

competitiveness and strengths in Chemistry, Chemical Engineering and Biotechnology.”

Joining hands to advance research that addresses societal needs

The School of CCEB will serve as a platform to launch new research areas or to augment existing research programmes that integrate science and technology, to address societal needs.

“The new school will continue to be located within the existing academic blocks of SCBE and SPMS, complemented with collaborative workspaces. The shared space provides a forum for engagement among members of the new School, increasing opportunities for the exchange of ideas,” said **Professor Louis Phee, Dean, College of Engineering**.

Professor Simon Redfern, Dean, College of Science added: “This new interdisciplinary School will be a unique environment for chemists as well as chemical, and biotech engineers to tap on one another’s expertise, complementing and bridging any disciplinary gaps in the process. This enhances opportunities for learning, collaboration and interdisciplinary research, facilitating the growth and development of the Chemistry, Chemical Engineering, and Biotechnology fields.”

Faculty, staff, and students at the joint School will forge ties with both the Colleges of Engineering and Science. Following the establishment of the new school in Aug 2022, the Chemistry and Biological Chemistry graduates from SPMS and graduates from SCBE will become CCEB alumni and benefit from new opportunities for professional engagement through the new school.

Third-year bioengineering undergrad **Muhammad Safwan**, founder and President of Makerspace, a student club in the School of SCBE that focuses on creating creative engineering projects, said, “The formation of the new School is a far-sighted initiative by the University to leverage interdisciplinary synergies. The study of Bioengineering requires a foundation in Chemistry. The establishment of the new School will provide opportunities for current and future students to further deepen our understanding of the subject, while developing a more comprehensive appreciation of its relevance to engineering applications.”

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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, Humanities, Arts, & Social Sciences, and Graduate colleges. It also has a medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London.

NTU is also home to world-class 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).

Ranked amongst the world's top universities by QS, NTU has also been named the world's top young university for the past seven years. The University's main campus is frequently listed among the Top 15 most beautiful university campuses in the world, and it has 57 Green Mark-certified (equivalent to LEED-certified) building projects, of which 95% are certified Green Mark Platinum. Apart from its main campus, NTU also has a campus in Singapore's healthcare district.

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.

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

ANNEX

The **School of Chemistry, Chemical Engineering and Biotechnology (CCEB)** will initially retain the current degree programmes that are being offered.

The establishment of the new School provides the opportunity to develop new courses and programmes as appropriate, based on the integration of chemistry and biological chemistry with chemical and biomedical engineering.

Current degree programmes on offer as follows:

Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences (SPMS)

- B.Sc. (Hons) in Chemistry and Biological Chemistry (CBC)
- B.Sc. (Hons) in CBC with Second Major in Food Science & Technology
- B.Sc. (Hons) in CBC with Second Major in Environmental Science
- B.Sc. (Hons) in CBC with Second Major in Business (International Trading) – *launching in AY2021/22*
- M.Sc. in Chemistry
- M.Sc. in Chemical Sciences and Instrumentation (MSCSI)
- Doctor of Philosophy in Chemistry

School of Chemical and Biomedical Engineering (SCBE)

- B.Eng. (Hons) in Chemical and Biomolecular Engineering (CBE)
- B.Eng. (Hons) in CBE with Second Major in Business (Mainstream)
- B.Eng. (Hons) in CBE with Second Major in Business (International Trading)
- B.Eng. (Hons) in CBE with Second Major in Food Science and Technology
- B.Eng. (Hons) in CBE with Second Major in Entrepreneurship – *launching in AY2021/22*
- B.Eng. (Hons) in Bioengineering (BIE)
- B.Eng. (Hons) in BIE with Second Major in Business (Mainstream)
- B.Eng. (Hons) in BIE with Second Major in Business (International Trading)
- B.Eng. (Hons) in BIE with Second Major in Food Science and Technology
- B.Eng. (Hons) in BIE with Second Major in Pharmaceutical Engineering
- B.Eng. (Hons) in BIE with Second Major in Entrepreneurship – *launching in AY2021/22*
- B.Eng. (Hons) in CBE and B.A. (Hons) in Economics
- B.Eng. (Hons) in BIE and B.A. (Hons) in Economics
- Master of Engineering
- Doctor of Philosophy
