

Annex B: College of Design and Engineering

The new NUS College of Design and Engineering (CDE) is a fusion of two world-class schools – Faculty of Engineering and School of Design and Environment. It is a future-focused, interdisciplinary learning and research institution designed to advance the applications and professions of Engineering, Architecture and Design.

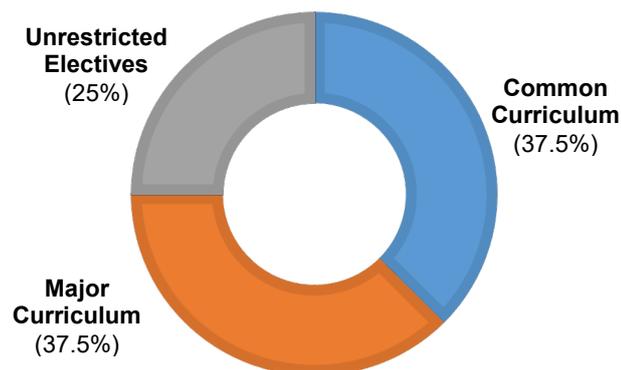
CDE will accept applications from prospective students from the next academic year (i.e. Academic Year 2022/23) onwards.

Interdisciplinary teaching and Learning

CDE builds on a knowledge-based learning approach to nurture soft skills, creativity and a problem-solving mindset. It offers a student-led learning experience, empowering students to take ownership of their future by offering them the choice and flexibility to go deep or broad in their area of study. It integrates deep disciplinary knowledge with real-world, cutting-edge research to maximise a student’s understanding and potential beyond theory to become an effective professional in action.

Education at CDE is further complemented by internships, fieldwork, capstone and collaborative projects to help students experience more multi-level and multi-modal learning.

Curriculum:



(a) Common Curriculum: The Common Curriculum comprises the equivalent of 15 modules, or 37.5% of the degree requirements. It is designed to impart essential 21st century skills and competencies to all CDE students, and equip them with an adaptable toolbox of skills across multiple disciplines, beyond their professional domain knowledge.

Design Thinking	Maker Space	Systems Thinking	Artificial Intelligence	Integrated Project
Sustainable Futures	Communities & Engagement	Creating Narratives	Project Management	
Singapore Studies	Cultures & Connections	Critique and Expression	Digital Literacy	Data Literacy

(b) Major Requirements: The Major Requirements comprise the equivalent of 15 modules, or 37.5% of the degree requirements.

(c) Unrestricted Electives: The remaining 25% of the overall curriculum (10 modules) is in the form of Unrestricted Electives, whereby students can choose what they take. They can choose from over 3,800 modules across NUS or they can also design their own modules. This flexible curriculum space enables students to deepen their expertise in their major, take a second major, or up to two minors or specialisations, without the need to increase their workload or extend their candidature.

Research

All departments under the CDE are ranked amongst the top 10 in the world by the QS World University Rankings by Subject 2021. CDE faculty members will continue to conduct cutting-edge research in areas such as:

- Micro-Electronics
- Quantum Engineering
- Engineering in Medicine
- Robotics & Machine Intelligence
- Urban Solutions & Sustainability
- Infrastructure Management
- Landscape and Ecological studies
- Digital Twin

The establishment of CDE will catalyse more interdisciplinary research projects and programmes between researchers from various disciplines.

Strong industry support

CDE was conceptualised and developed by a task force chaired by NUS Senior Deputy President and Provost Professor Ho Teck Hua, and comprising six industry leaders, Dean of the Faculty of Engineering, Dean of the School of Design and Environment, as well as eight academics from the two schools. This is to ensure that the programmes offered by CDE are attractive and relevant to market needs.

Professional institutions such as the Professional Engineers Board and the Singapore Board of Architects have also expressed support for the common curriculum.