

CDE LEARNING JOURNEYS

PRE-UNIVERSITY STUDENTS

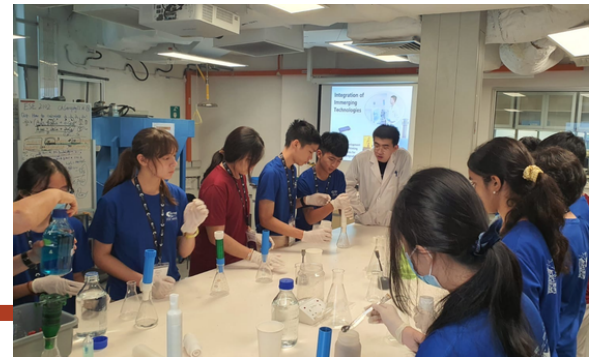


THE FUTURE OF DESIGN & ARCHITECTURE

- Architecture Studios
- Industrial Design Studios
- Innovation & Design Hub

IMPACTING LIVES

- Chemical Engineering Lab
- Engineering in Medicine Lab
- Materials Science & Engineering Lab



SUSTAINABLE BUILT ENVIRONMENT

- Net-Zero Energy Building
- Centre for 5G Digital Building Technology
- Centre for Water Research
- Hydraulics & Coastal Resilience Lab



ROBOTICS & TECHNOLOGY

- Advanced Robotics Centre*
- Blk E6 NanoFab & SHINE Centre*
- Engineering Science Lab
- Energy Conversion Lab
- NUS Simulation Modelling & Analysis Lab
- Satellite Technology & Research Centre*



CDE LEARNING JOURNEYS

PRE-UNIVERSITY STUDENTS

OVERVIEW



TOUR AVAILABILITY & DURATION

The tour at each location ranges from 30 mins to 1 hour. Please contact kaybie82@nus.edu.sg to check on the date availability at least 6 weeks before the proposed visit. Requests are subjected to availability.



ELIGIBILITY & GROUP SIZE

Learning journeys at CDE are open to Upper Secondary and Pre-tertiary schools in Singapore

Each tour location is capped at the maximum number of pax stated in the booklet. For group sizes bigger than the tour capacity, we may arrange for a rotation between tour locations.



TOUR PROGRAMME

The learning journey includes a 45 mins sharing on an overview of CDE, which covers information on admission, CDE curriculum and student life sharing by undergraduate students.



COST

Food & beverage as well as shuttle bus services are not provided as part of the learning journey.

We can provide catering upon request at \$10/pax with a minimum of 20 pax.

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THE FUTURE OF DESIGN & ARCHITECTURE

ARCHITECTURE STUDIOS

Join our tours to experience our award-winning learning environments. See and touch the drawings and models made by NUS Architecture and Landscape Architecture students across different years. Learn about the design processes and thinking behind what our students made from the students themselves in their own studios.

of pax: 90



Relevant programme: Architecture & Landscape Architecture

INDUSTRIAL DESIGN STUDIOS

Check out where our designers work at SDE4. Take a peek at the design studio where we collaborate on new projects, the workshop where ideas are made real, our 3D rapid prototyping labs, and more! You might even find yourself feeling inspired to come up with your own ideas at the end of the tour.

of pax: 30

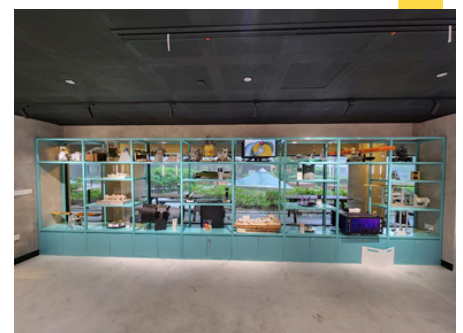


Relevant programme: Industrial Design

INNOVATION & DESIGN HUB

Come and see the many prototypes from student projects in the Innovation & Design Programme, covering a wide range of real-world project themes such as better healthcare, future mobility, smarter living, sustainable cities, intelligent system, and immersive reality. Also, take a look at the cool prototyping space and various equipment that students can use for their prototyping work!

of pax: 20



Relevant programme: Innovation & Design Programme (Second Major or Minor)

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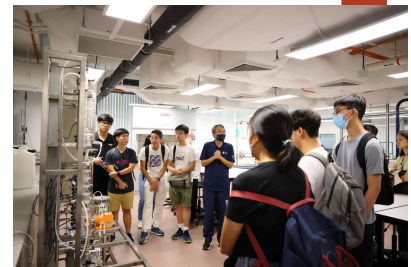
IMPACTING LIVES

CHEMICAL ENGINEERING LAB

In this lab, chemical plant components are scaled down to allow students to learn fluid mechanics, heat and mass transfer, reaction engineering, separations, process control and various other Chemical Engineering principles through experiential learning.

Relevant programme: Chemical Engineering

of pax: 40



ENGINEERING IN MEDICINE LAB

We will bring you on a journey through specific strategic research capabilities of NUS Biomedical Engineering, ranging from medical imaging, computational neuroscience to cardiovascular engineering and soft robotics; each of which has pushed the boundaries of healthcare research, and advanced the quality of care through practice-changing innovations.

Relevant programme: Biomedical Engineering

of pax: 15



MATERIALS SCIENCE & ENGINEERING LAB

Materials Science & Engineering Teaching Laboratory, with well-equipped scientific equipment for advanced materials characterization and development. Join our tour to learn about scanning electron microscope, X-ray photoelectron spectrometer, X-ray diffractometer and more.

Relevant programme: Materials Science & Engineering

of pax: 25



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SUSTAINABLE BUILT ENVIRONMENT

CENTRE FOR WATER RESEARCH

The Tour will give inside look at innovative and sustainable technology of Environmental Engineering Programme. The exclusive tour will include an educational visit to Environmental laboratories and hand-on experiences of a 3D-printed water filter.

Relevant programme: Environmental & Sustainability Engineering

of pax: 20



CENTRE FOR 5G DIGITAL BUILDING TECHNOLOGY

Join our highly knowledgeable faculty at our Centre for 5G Digital Building Technology to find out more about how we harness 5G connectivity, cloud-based digital twin and robotics for Smart FM and the Built Environment sector.

Relevant programme: Infrastructure & Project Management

of pax: 20



HYDRAULICS & COASTAL RESILIENCE LAB

The Hydraulics & Coastal Resilience Lab tour will show innovative research and technology of nature-based solutions to coastal protection. An experimental test run will be conducted to demonstrate how seagrass and mangroves curb erosion.

Relevant programme: Civil Engineering

of pax: 20



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SUSTAINABLE INNOVATIONS

NET-ZERO ENERGY BUILDING

Operational since January 2019, SDE4 is Singapore's first net-zero energy building. Join the Department of the Built Environment as we bring you on a tour to explore the sustainable design features that have been integrated into its architecture to deliver user health and comfort, and to make it highly energy efficient.

Relevant programme: Infrastructure & Project Management

of pax: 30



ROBOTICS & TECHNOLOGY

ADVANCED ROBOTICS CENTRE

Come to see the cool robots and meet the talented people behind them! Take a ride on our autonomous wheelchair, take a wifie with our dog, SPOT, shake hand with and witness our robots in action!

Relevant programme: Mechanical Engineering

of pax: 20

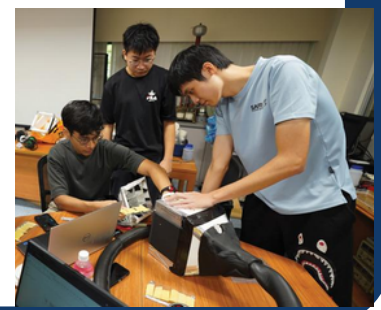


ENGINEERING SCIENCE LAB

In this tour, we will visit one of the teaching laboratories of the Engineering Science Programme in the College of Design and Engineering. Engineering Science Students will showcase their projects that they have worked on for several of the core engineering science and design modules.

Relevant programme: Engineering Science

of pax: 30



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ROBOTICS & TECHNOLOGY

E6NANOFAB & SHINE CENTRE

E6NanoFab supports mutli-disciplinary nano-microelectronics research and is home to Singapore Hybrid-Integrated Next-Generation μ -Electronics (SHINE) Centre that seeds heterogenous integration pilot line to enable hybrid electronics technologies for diverse Internet of Things applications. Take a look at lithography, deposition and characterization capabilities in the tour!

Relevant programme: Electrical Engineering

of pax: 16



ENERGY CONVERSION LAB

The Energy Conversion Lab in Mechanical Engineering focuses on sustainable air-conditioning technologies, including adsorption chillers, microturbines, and dew-point evaporative coolers. It supports energy efficiency and decarbonisation while providing hands-on learning opportunities in real-world energy systems, particularly relevant for tropical climates like Singapore.

Relevant programme: Mechanical Engineering

of pax: 25



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ROBOTICS & TECHNOLOGY

NUS SIMULATION MODELLING & ANALYSIS LAB

This lab hosts 75 computing terminals installed with a variety of software platforms for students and researchers to learn about systems design, modelling, analysis and optimisation techniques. Platforms include state-of-the-art discrete and dynamic simulation software, data analytics tools and decision theoretic systems.

Relevant programme: Industrial & Systems Engineering

of pax: 75



SATELLITE TECHNOLOGY AND RESEARCH CENTRE

The centre was setup as a joint laboratory between NUS and DSO National Laboratories. Get the chance to learn how a real satellite is built, how the satellite is tested on earth before its launch into the orbit, and the challenges in operating a satellite in space environment.

Relevant programme: Electrical & Computer Engineering

of pax: 20

