ADMISSION CRITERIA

In addition to the general admission requirements set by NTU, applicants need to fulfil the following minimum subject requirements:

**GCE ‘A’ LEVEL:** H2 Level pass in Mathematics and H2 Level pass in Physics / Chemistry / Biology / Computing, and H1 Level / ‘O’ Level pass in Physics. ‘O’ Level pass in Physics is only applicable to applicants who have not read Physics at H2 / H1 Level.

**POLYTECHNIC DIPLOMA:** An engineering diploma from local polytechnics. Relevant diplomas will be considered for direct entry into the second year (by merit), and may be exempted from selected courses. For the list of acceptable local diplomas, please refer to: admissions.ntu.edu.sg/UndergraduateAdmissions/Pages/PolyDiploma.aspx

**INTERNATIONAL BACCALAUREATE DIPLOMA:** Mathematics at Higher Level and Physics / Chemistry / Biology / Computer Science at Higher Level and Physics at Standard Level for applicants who have not read Physics at Higher Level.

**NUS HIGH SCHOOL DIPLOMA:** Major CAP of 2.0 in Mathematics and Major CAP of 2.0 in Physics / Chemistry / Biology and Overall CAP of 2.0 in Physics for applicants who have not majored in Physics.

**INTERNATIONAL STUDENTS:** Mathematics and Physics / Chemistry / Biology at Senior High School Level / IB Higher Level or Computer Science at IB Higher Level and Physics at Junior High School Level / IB Standard Level for applicants who have not read Physics at Senior High School Level / Higher Level.

For updated information on admission, please refer to admissions.ntu.edu.sg

GRADUATE STUDIES OPPORTUNITIES

For those who aim to pursue postgraduate degrees in Civil and Environmental Engineering, we offer graduate programmes which lead to the award of the Master’s degree as well as the Doctor of Philosophy (PhD) degree.

- The Master’s degree can be undertaken by research or coursework and dissertation
- The PhD degree is by research only
When I was a kid, my favourite game was to play with Lego™ blocks. With only my imagination, I could put these little bricks together to form amazing structures.

Studying Civil Engineering in NTU has allowed me to realise my childhood dream!

Here, I am exposed to interdisciplinary studies such as analysing structures, providing water supplies, building road and transportation systems while ensuring the sustainability of the environment.

In NTU, we are encouraged to learn independently and think critically, just like how a civil engineer does. NTU CEE also provides me with the opportunity to improve my interpersonal and leadership skills through various programmes such as the Outreach and Freshmen Orientation Programme.

As an aspiring civil engineer, I can’t wait for the Professional Internship in my final semester, where I can put my knowledge to use and have a glimpse of what the industry is like. If you are looking for a challenging and life changing career, Civil Engineering is definitely the right course for you!
Bachelor of Engineering (Civil Engineering)

Bachelor of Engineering (Environmental Engineering)

CEE

School of Civil and Environmental Engineering
OUR MISSION
To nurture students to be responsible leaders capable of realising their maximum potential in their profession and community; to provide a collegiate environment for faculty to excel in education and research for sustainable development; and to advance knowledge for the practice of civil and environmental engineering and maritime professions.

OUR VISION
To be a leading school for sustainable built environment.

ABOUT THE SCHOOL

The School of Civil and Environmental Engineering (CEE) was one of the three pioneering engineering schools when the university first started as Nanyang Technological Institute in 1982, offering the Bachelor of Engineering programme in Civil Engineering. The Bachelor of Engineering programme in Environmental Engineering first began in 2003. In 2004, Maritime Studies programme was inaugurated.

The undergraduate programmes offered by CEE include:

1. Civil Engineering
   - Bachelor of Engineering (Civil)
   - Bachelor of Engineering (Civil) with Second Major in Business
   - Bachelor of Engineering (Civil) with Second Major in Society & Urban Systems
   - Double Degree in Bachelor of Engineering (Civil) and Bachelor of Arts (Economics)

2. Environmental Engineering
   - Bachelor of Engineering (Environmental Engineering)
   - Bachelor of Engineering (Environmental Engineering) with Second Major in Business
   - Bachelor of Engineering (Environmental Engineering) with Second Major in Society & Urban Systems
   - Double Degree in Bachelor of Engineering (Environmental Engineering) and Bachelor of Arts (Economics)

3. Maritime Studies
   - Bachelor of Science in Maritime Studies
   - Bachelor of Science in Maritime Studies with Specialisation in International Trading Programme
   - Bachelor of Science in Maritime Studies with Second Major in Business
   - Bachelor of Science in Maritime Studies with Second Major in Business and Specialisation in International Trading Programme

We provide a number of practice-oriented courses to prepare you for a challenging career ahead. Our courses are designed to provide the requisite breadth and depth so that you are able to pursue a career in planning, design and construction of civil, environmental, maritime projects and systems, as well as in research and development. Lectures and tutorials complemented by laboratory sessions, design projects, practical training, industrial visits
WHAT DO CIVIL ENGINEERS AND ENVIRONMENTAL ENGINEERS DO TODAY?

Upon graduation, you will be involved in various engineering fields and environments. As a civil/environmental engineer, you build the world’s infrastructure. You erect structures, both modest and magnificent; bring fresh water to the masses, dispose or recycle the waste they generate; and move people and goods safely and efficiently from one location to another. In the new millennium, civil/environmental engineers will be challenged to find the best solutions to the most pressing problems of society and there will be many opportunities to apply sophisticated technologies to meet society’s needs in an environmentally sustainable manner. You can look forward to a wide range of career prospects in fields such as infrastructure planning and development, construction technology, seismic and protective engineering, structural project procurement and management, environmental technologies development, wastewater reclamation and reuse, membrane technologies, water treatment, desalination and resource recovery.

and seminars will equip you with the principles and practical aspects in your areas of study. Soft skills courses are incorporated to provide you with a holistic education that spurs you to a successful career. You can also look forward to collaborations with prestigious overseas universities, government agencies and private organisations.

The School’s research focus and strength are as follows:

1. Environmental and Water Resources Engineering
   - Integrated Urban Storm-water Management
   - Sediment Transport and Coastal Management
   - Waste Minimisation, Recycling & Resources Recovery
   - Membrane Technology
   - Biotechnology in Wastewater Treatment
   - Environmental Chemistry
   - Air Quality

2. Infrastructure Systems and Maritime Studies
   - Transport Modelling and Traffic Management
   - Risk and Project Finance for Infrastructure Projects
   - Information Technology for Construction Management
   - Land Reclamation
   - Underground Space Development
   - Tropical Soils Engineering
   - Maritime Logistics and Port Economics

3. Structures and Mechanics
   - Computational Mechanics
   - Dynamics and Seismic Engineering
   - Protective Technology
   - Fire and Building Engineering
   - Offshore Engineering
   - Structural Health Monitoring and Damage Prognosis
   - Structural Steel and Concrete
   - Sustainable Construction Materials

We have well-equipped laboratories with highly developed facilities to support teaching and intensive research; namely Information Technology Support and Computing; Environment; Hydraulics; Protective Engineering and Construction Technology; Geotechnics, Transport and Geospatial.
The Civil Engineering programme is structured on a flexible and diverse system that allows you to choose from a broad range of courses to receive a well-rounded education while maintaining high academic standards. Students take common engineering courses which deal with basic concepts in mathematics, science and fundamental engineering principles, followed by a balanced mix of core courses in the civil engineering discipline and general education electives (core and unrestricted).

During the course of study, students can register for industrial training in a private company or at government agencies, where they can practise civil engineering under the guidance of experienced engineers and managers. In the final year, the programme concentrates on preparing students for professional civil engineering practice as well as on equipping them with managerial and entrepreneurial skills. Students are also required to complete a two-semester duration final year project in any of the specialisations within civil engineering.

### Course Offered

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<tr>
<td>Mechanics of Materials</td>
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<td>Matrix Algebra and Computational Methods</td>
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<td>Professional Internship</td>
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<td>Steel Design</td>
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</table>

- Engineers and Society
- Project Planning and Management
- Seminars and Site Visits
- Final Year Project
- Integrated Design Project
- Major Prescribed Elective
- Construction Technology and Processes
ENVIRONMENTAL ENGINEERING PROGRAMME

The Environmental Engineering programme is centred on a comprehensive curriculum with the aim of giving students a well-rounded education. Students take common engineering courses which include basic concepts in mathematics, science and fundamental engineering principles, as well as core courses in the environmental engineering discipline and civil engineering discipline.

During the course of study, students can register for industrial training with private companies or government agencies, where they can practise environmental engineering under the guidance of experienced engineers and managers. In the final year, the programme concentrates on preparing students for professional environmental engineering practice as well as on equipping them with managerial and entrepreneurial skills. Students are also required to complete a two-semester duration final year project in any of the specialisations within environmental engineering.

Course Offered

- Mathematics
- Computing
- Physics
- Engineering & Practices
- Engineering Communication I
- Fluid Mechanics
- Mechanics of Materials
- Hydraulics
- Probability and Statistics
- Environmental Issues in a Changing World
- Environmental Biology and Microbiology
- Engineering Geology and Soil Mechanics
- Solid and Hazardous Waste Management
- Wastewater Engineering
- Environmental Transport Processes
- Enterprise and Innovation
- Engineering Communication II
- Reinforced Concrete Design
- Engineers and Society
- Project Planning and Management
- Seminars and Site Visits
- Final Year Project
- Integrated Design Project
- Major Prescribed Elective
- Air Pollution Control Engineering

Please refer to the school’s website for the updated curriculum structure.
www.cee.ntu.edu.sg/Students/Undergraduate/Curriculum/Pages/Home.aspx