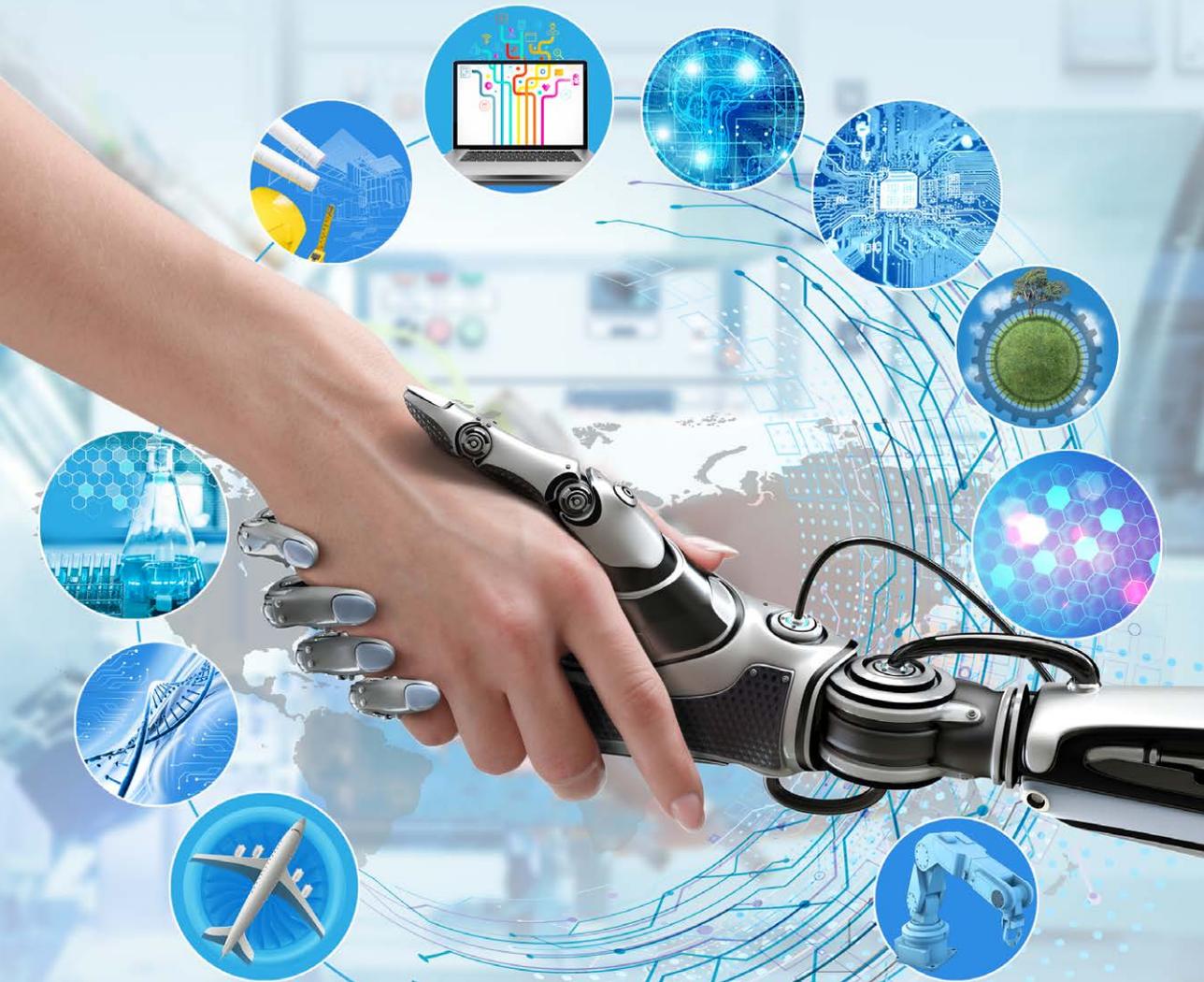




**NANYANG
TECHNOLOGICAL
UNIVERSITY**
SINGAPORE



REP

Renaissance Engineering Programme



Director's Message



NTU's Renaissance Engineering Programme (REP) is committed to nurture engineering leaders with an entrepreneurial spirit to serve society with integrity and dedication. Our unique broad-based, inter-disciplinary engineering education, which integrates engineering, science, business, technology management and humanities, prepares students to be future-ready whereby students can learn and unlearn while taking on top positions as Chief Executive Officers and Chief Technology Officers. During the programme, students can look forward to a one-year overseas study stint at a renowned partner university, including working with an organisation as part of Professional Attachment requirements. These lay the foundation for global perspectives and cross-cultural capabilities which are inherently critical qualities for future leaders. Leadership is a special feature in REP, as we provide a structured leadership development programme for students to discover their potential. At the REP, we adopt new pedagogies of learning and teaching, which train students to take on a more dynamic and participative role in their own learning.

The student life in REP is marked by its vibrancy and close-knit community. Students can enjoy guaranteed hall stay in North Hill, an integrated teaching and residential facility for REP. Outside the classroom, there are plenty of fun-filled events and activities spearheaded by the student body of REP, called the REClub.

We strive to ensure that REP students have an enriching and holistic experience in NTU as well as the partner university in Year 3. We warmly welcome you to the REP community, and wish you a fantastic journey ahead.

Professor Lalit Goel

Director
Renaissance Engineering Programme





REP - The Future of Engineering Education





Programme Overview

REP is a flagship engineering programme that aims to nurture students as future leaders of industry. It is a dual-degree programme offering Bachelor of Engineering Science (with a Specialisation in a specific engineering discipline) and Master of Science (Technology Management) degrees in 4.5 years. The curriculum is broad-based interdisciplinary in nature and integrates engineering, science, business, technology management and humanities.

Year
1 & 2

Common core courses in mathematics, sciences and engineering disciplines and functional areas of business and entrepreneurship



Year
2 & 4

Core and elective courses in any of the 10 engineering specialisations



Aerospace Engineering



Bioengineering



Chemical and Biomolecular Engineering



Civil Engineering



Computer Engineering



Computer Science



Electrical and Electronic Engineering



Environmental Engineering



Materials Engineering



Mechanical Engineering



Year
3

Overseas one-year study in a chosen engineering specialisation at one of the renowned partner universities*, with Professional Attachment



University of California, Berkeley

Imperial College London



Northwestern University



University of British Columbia



University of Toronto



**Subject to change*



Year
4 & 5

Core and elective courses in the management of technology, along with Renaissance Capstone Project (RCP) or Final Year Project (FYP)

Throughout the programme, students will also take common and elective courses in ethics and humanities and embark on a leadership programme.



Admission Information

Admission Qualifications

Applicants should possess the requisite pre-university qualifications in order to be admitted to the Programme.



Admission Requirements*

Singapore - Cambridge GCE A-level Certificate	<ul style="list-style-type: none"> • At least two passes in subjects at H2 level, and attempted General Paper (GP) or Knowledge & Inquiry (KI) in the same sitting • H2 level pass in Mathematics • H2 level pass in either Physics or Chemistry or Biology or Computing • 'O' Level or equivalent pass in Physics for applicants who have not read H2 level Physics
International Baccalaureate Diploma	<ul style="list-style-type: none"> • Mathematics at Higher Level • Physics or Chemistry or Biology or Computer Science at Higher Level • Physics at Standard Level or equivalent pass for applicants who have not read Physics at Higher Level
NUS High School Diploma	<ul style="list-style-type: none"> • Major CAP of 2.0 in Mathematics, and Physics or Chemistry or Biology • An overall CAP of 2.0 in Physics is applicable to applicants who have not majored in Physics
Polytechnic Diploma	<ul style="list-style-type: none"> • 'O' Level pass in Physics • A good GPA in an Engineering-related diploma
International Qualifications	<ul style="list-style-type: none"> • Mathematics at Senior High School Level • Physics or Chemistry or Biology at Senior High School Level • Physics at Junior High School Level for those without Physics at Senior High School Level • A good grade in General Paper or English at Senior High School Level

**Applicants may refer to the NTU and REP website for full details of the admission requirements.*

Application

All applicants seeking admission to the Renaissance Engineering Programme are required to submit their application via the NTU Admissions website. As admission to the REP is in conjunction with admission to a NTU Premier Scholars Programme, applicants are required to submit a personal essay and provide at least one referee's appraisal with their applications. Shortlisted candidates are required to go through a Multiple Mini Interview format and produce relevant supporting documents for verification.



Renaissance Engineering Programme Scholarship

The REP Scholarship* is awarded to outstanding freshmen pursuing a full-time Renaissance Engineering Programme in NTU. It recognises students who excel academically, demonstrate strong leadership potential, and possess outstanding co-curricular records.

Only successful applicants will be offered the REP scholarship. No bond is attached to the REP Scholarship apart from the three-year bond applicable to all Singapore PRs and international students under the MOE Tuition Grant Scheme.

**Applicants are requested to refer to the REP website for full details of the scholarship terms and conditions.*

Professional Attachment

All REP students have the opportunity to do their professional attachment in US, Europe or Singapore.

The attachment can be self-sourced or placed by the NTU Career and Attachment Office. The attachment can be in private organisations or start-ups. Examples of organisations where students have interned include Dyson, McLaren Applied Technologies, Merck & Co., Cisco Systems, Shopee Singapore and Apple South Asia.

“ It was an incredible experience interning at Dyson UK. I was a Research, Design and Development intern working alongside passionate design engineers, helping to design the next generation of Personal Care products. Beyond putting into practice the hard skills I picked up in school, I had the opportunity to learn from and work with the experts in the various fields like Finite Element Analysis and Materials, to name a few. I was able to gain a deeper appreciation of the dynamic, collaborative environment that Dyson actively cultivates, and I often felt empowered by the strong sense of autonomy offered by Dyson’s workplace culture. For instance, my manager listed the desired goals and gave me the freedom to achieve them in whichever way I deem fit. It was a joy to work in such an exciting company, and I am grateful for the opportunity.”



Loh Xing Bao Colin

Year 4

Mechanical Engineering

Interned at Dyson, UK



Students' Experience

Student Life

REP is committed to provide students with various opportunities to explore their interests, meet and work with like-minded individuals on meaningful projects and have an enriching and rewarding student life.

We work closely with the Renaissance Engineering Club (REClub), the student body of REP to co-organise events, and to provide mentorship and support to student-led initiatives. Some examples of student-led initiatives supported by the REP Office include Makers' Lab which is an ongoing project for students to create innovative solutions to real world engineering problems; Transition and Orientation Programme which is an annual week-long freshmen orientation programme; REPlay which is an annual showcase of talent in sports and performing arts; HEAL which is overseas service learning and REPeroire which is the performing arts branch of REClub.



Transition and Orientation Programme

REPlay



REClub



REPeroire



HEAL



Makers' Lab



Students' Experience

REP Residential Experience

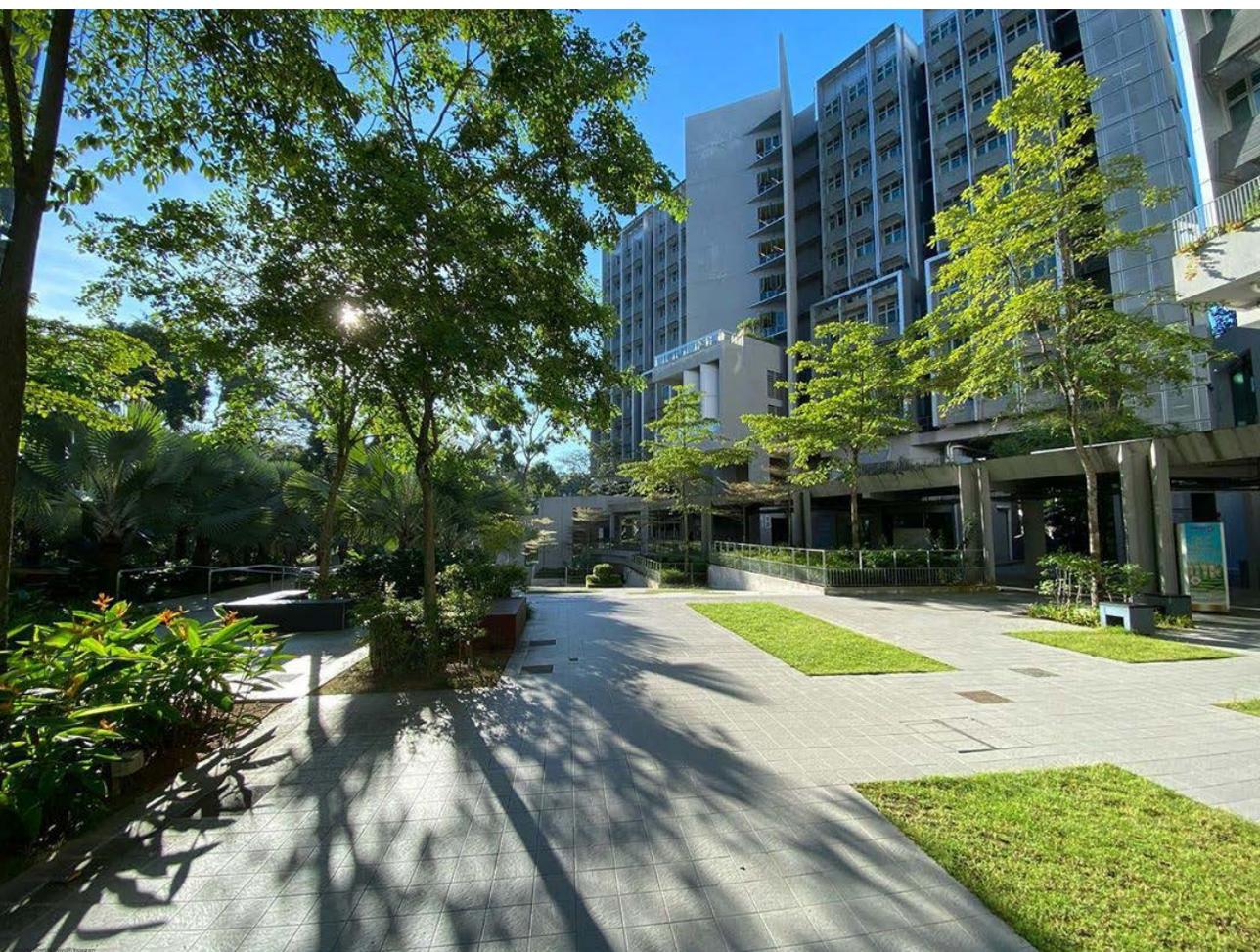
REP Students are housed in North Hill, which is an integrated teaching and residential facility in NTU.

At North Hill, students can enjoy a range of recreational amenities and modern facilities right at their doorstep. It is a vibrant hall of activity. In addition, the teaching facilities at North Hill include 2 seminar rooms over two floors, 7 Discussion rooms including 2 rooms with self-recording video capabilities and 2 interactive lounge rooms equipped with LED screens.

Life at REP is truly a home-away-from-home. Discover your home at North Hill where you can learn and live in a safe, comfortable and fun environment.



Scan to watch video on North Hill.





Testimonials

Hear what our students and alumni have to say about their experiences in REP.



Scan to read student and alumni testimonials



Students' Testimonials



Alumni Testimonials



Career Prospects

REP graduates will have the potential to develop into next-generation Industry Leaders (including Chief Executive Officers/Chief Technology Officers) who will be at the forefront of, and well-positioned for, the Grand Challenges of Engineering for the 21st Century.

With the broad-based interdisciplinary curriculum of the programme, REP graduates are well-equipped with the knowledge and skills to handle multi-faceted jobs in different industries.

Typical industries for REP graduates include but are not limited to:



Aviation



Government



Banking and Finance Industry



Internet & Information Technology



Biomedical & Pharmaceutical



Other Engineering Manufacturing & Activities



Consulting



Petrochemical



Consumer Products

The job positions for REP graduates include but are not limited to:

- Associate App Consultant
- Associate Environment Consultant
- Associate Scientist, Imaging
- Cloud Architect
- Crystal Growing Engineer
- Cyber Security Analyst
- Data Engineer
- EO/EG OMEGA Technologist
- Graduate Acoustic Engineer
- Graduate Structural Engineer
- Junior Gameplay Programmer
- Management Associate
- Materials Supply Analyst
- Military Expert
- Product Manager
- Project Manager
- R&D Engineer
- Regional Engineer
- Regional Operations Associate
- Robotics Software Engineer
- Software Developer
- Strategic Operations Analyst
- Systems Test Engineer
- Technology Strategist

Renaissance Engineering Programme

Nanyang Technological University
Academic Block North, 61 Nanyang Drive, ABN-B2b-11
Singapore 637335

For further enquiries, please contact

 (65) 6592 3183

 rep@ntu.edu.sg

 [REP.NTUsg](https://www.facebook.com/REP.NTUsg)

Information is correct at time of printing (January 2021).
For updates, please refer to the website.



www.ntu.edu.sg/rep