FACULTY OF ENGINEERING

HOW WE SEE OURSELVES
An Engineering School advancing technology, influencing Asia and beyond

WHAT WE SEEK TO DO
Nurture Engineer-Leaders with passion and boldness to solve complex challenges
GETTING THE BEST OF A DIVERSIFIED WORLD AT ENGINEERING

The National University of Singapore (NUS) is a leading global university centred in Asia, seeking to nurture students with a strong appreciation of global issues alongside Asian perspectives.

At the Faculty of Engineering, a multidisciplinary curriculum and a host of enhancement programmes are designed to help you get that global experience as well as leadership skills – with an Asian perspective. Opportunities abound to learn beyond the classroom through our international student exchange programmes. You can also choose to work as interns in start-ups in Silicon Valley, Bio Valley, Bangalore, Shanghai, Beijing and Stockholm via the NUS Overseas Colleges. The Faculty’s undergraduate research programme also provides opportunities for anyone interested to explore innovative solutions.

The Faculty’s major degree programmes are accredited by their respective engineering institutions in the UK as an equivalent to their Master of Engineering (M Eng) degree. Degrees offered by the Faculty are also accredited by the Engineering Accreditation Board of Singapore, which is a signatory of the Washington Accord. This means that NUS engineering graduates are recognised as having met the academic requirements for engineering practice in other countries that are also signatories, including Australia, Canada, Hong Kong, Japan, New Zealand, the UK and USA.
*DESIGN-CENTRIC CURRICULUM*

As the world becomes increasingly challenged by global warming and other related complex issues, the Faculty of Engineering has defined a new paradigm in education, introducing a new alternative learning pathway – the Design-Centric Curriculum (DCC). This new Curriculum provides a platform bringing together engineering, form, function, aesthetics, culture and lifestyle. Through the design process, students will learn to solve problems from multidisciplinary perspectives. Forging strong partnerships with the University’s School of Design and Environment, Faculty of Science and Yong Loo Lin School of Medicine, the DCC explores three initial themes: Future Transportation Systems, Engineering in Medicine; and Smart and Sustainable Cities.

For DCC, please visit: [http://www.eng.nus.edu.sg/ugrad/dcc](http://www.eng.nus.edu.sg/ugrad/dcc) for more information.

*GLOBAL ENGINEERING PROGRAMME*

The Global Engineering Programme (GEP) is designed to attract the very best students to read Engineering at NUS. Students taking the GEP would have shown exceptional potential as Engineer-Leaders of tomorrow. After three years at NUS supported by a scholarship, they will receive their Bachelor of Engineering in the field they have chosen. They will then go on to pursue a postgraduate degree at a top partner university. Graduates can continue with doctoral studies thereafter or enrol directly in a PhD programme. NUS will also help source funding from external agencies to fund GEP students for their graduate studies overseas.

For GEP, please visit: [http://www.eng.nus.edu.sg/ugrad/gep](http://www.eng.nus.edu.sg/ugrad/gep) for more information.
The Faculty of Engineering offers a range of engineering programmes:

- Bachelor of Engineering (Bioengineering)
- Bachelor of Engineering (Chemical Engineering)
- Bachelor of Engineering (Civil Engineering)
- Bachelor of Engineering (Civil Engineering, Joint Degree Programme with the University of Melbourne)
- Bachelor of Engineering (Computer Engineering)
- Bachelor of Engineering (Electrical Engineering)
- Bachelor of Engineering (Engineering Science)
- Bachelor of Engineering (Environmental Engineering)
- Bachelor of Engineering (Industrial and Systems Engineering)
- Bachelor of Engineering (Materials Science and Engineering)
- Bachelor of Engineering (Mechanical Engineering)

**DIVERSE CURRICULUM**

**DOUBLE MAJOR PROGRAMMES**
You can pursue a second major from another Faculty or School in addition to your engineering major, choosing topics ranging from Management, Management (Technology) to Psychology. A Bachelor of Engineering (B Eng) degree with Honours and a second major can be completed within four years.

**DOUBLE DEGREE PROGRAMMES**
- B Eng and B Arts (Economics)
- B Eng and B Business Administration
- B Eng and B Business Administration (Accountancy)
- Double Degree Programme with French Grandes Ecoles

*All Engineering programmes except Engineering Science.

**PART-TIME PROGRAMMES**
If you are a polytechnic graduate seeking to upgrade yourself, the Bachelor of Technology Programme may be what you are looking for. Choose from four such programmes:
- Chemical Engineering
- Electronics Engineering
- Industrial and Management Engineering
- Mechanical/Manufacturing Engineering
The Engineering Science Programme is one of Asia’s first engineering degree programmes jointly offered by the Faculties of Engineering and Science. You can look forward to becoming a new class of engineer-scientists better prepared to solve interdisciplinary and multidisciplinary problems of high-tech world, develop innovative designs, and integrate systems with the application of both the engineering and science disciplines. You will be fortified with a strong scientific background for doctoral studies in engineering, science, and medicine, as well as for leadership positions in R&D, government, and civilian jobs.

In the first two years of the programme, you read a set of core engineering science modules. Design projects are injected in the early years to provide hands-on experience that tests and extends the concepts introduced in various modules with application of the fundamental knowledge learnt and help students to develop critical skills such as creative thinking, interpersonal communication, and team work. A 12-week research internship in R&D labs in Singapore or prestigious academic institutions abroad is essential.

Ample employment opportunities are available to graduates in traditional engineering and business markets as well as emerging technologies such as nanotechnology and renewable energy technologies. It is expected that a significant number of students will proceed to PhD programmes in engineering, natural sciences, and medicine. You may also explore opportunities in academic R&D labs and industry R&D labs, as well as start-up nanotechnology and other high-tech companies.

Specialise in these areas and more:

- Nanoscience and Nanotechnology
- Computational Engineering Science
- Energy Systems
- Bioimaging and Optics

What do you get when you add mathematics, physics, computer science, biological and chemical sciences to classical engineering studies? You get a whole new exciting field called Engineering Science.

Of the heart and the mind, of intuition and reason, such is the cross-disciplinary nature of Engineering Science. The Engineering Science Programme provides the scientific and mathematical tools for the fundamental study of engineered systems, which range from nanomaterials and structures to microelectronic devices, transportations systems (e.g., automobiles and aircraft), energy, as well as chemical and biological systems.

REACH US TODAY  email espbox1@nus.edu.sg  tel (65) 6516 3354  www.esp.nus.edu.sg
ADMISSION TO ENGINEERING

Applicants can apply online via the NUS Office of Admissions website: [http://www.nus.edu.sg/oam/](http://www.nus.edu.sg/oam/)

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<tr>
<th>B Eng Programme</th>
<th>Duration (Years)</th>
<th>Requirements for Admission</th>
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<tbody>
<tr>
<td>1. Chemical Engineering</td>
<td>3½ – 4</td>
<td>• H2 Mathematics, and</td>
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<td>2. Environmental Engineering</td>
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<td>• H2 Chemistry, and</td>
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<td></td>
<td>• H2 Physics*</td>
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<tr>
<td>3. Bioengineering**</td>
<td>3½ – 4</td>
<td>• H2 Mathematics, and</td>
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<tr>
<td>4. Civil Engineering</td>
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<td>• H2 Physics* or H2 Chemistry</td>
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<td>5. Computer Engineering</td>
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<td>6. Electrical Engineering</td>
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<td>7. Industrial &amp; Systems Engineering</td>
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<td>8. Materials Science &amp; Engineering</td>
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<td>9. Mechanical Engineering</td>
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<tr>
<td>10. Engineering Science</td>
<td>3½ – 4</td>
<td>• Good grades in H2 Mathematics, and</td>
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<td></td>
<td></td>
<td>• H2 Physics</td>
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<tr>
<td>Double Degree in:</td>
<td>4 – 5</td>
<td>Two routes of admission:</td>
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<tr>
<td>1. Engineering (except Engineering Science Programme) &amp; Business Administration</td>
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<td>1. Direct admission by students who meet entry requirements for both courses (except Engineering Science Programme).</td>
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<tr>
<td>2. Engineering (except Engineering Science Programme) &amp; Economics</td>
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<td>2. Application by students in a B Eng (except Engineering Science Programme) or BBA/Economics Programme at end of their first year of study.</td>
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* Students without H2 or H1 Physics need to have ‘O’ level Physics or equivalent and will be required to take specified Physics bridging modules.

** Students who do not have a H2 pass in Biology will have to read the Biology Bridging Module (LSM1301) in the 1st year. Those without a H2 pass in Chemistry will have to read the Chemistry Bridging Module (CM1417) in the 1st year.

- Applicants (regardless of nationality) presenting an acceptable Diploma from a Polytechnic in Singapore may also apply. Please visit [http://www.nus.edu.sg/oam/apply/local/poly/BYA-poly.html](http://www.nus.edu.sg/oam/apply/local/poly/BYA-poly.html) for more details.
- International applicants with international qualifications can apply using equivalent high-school results.
- Singaporeans with international qualifications can apply using equivalent high-school results.