WHAT IS ENGINEERING?

Do you know engineering is the only career in which you look at the world’s problems and work out practical ways to solve them? Modern challenges of urban living, ageing society and climate change require good technology that uses fewer materials and less energy. Engineers use the principles of mathematics and science to come up with useful products or ways of doing things to make our lives better.

ACCORDING TO MIT, NUS IS AMONG THE WORLD’S TOP 10 LEADERS IN ENGINEERING EDUCATION! WHAT MAKES OUR PROGRAMMES SPECIAL?

www.eng.nus.edu.sg
Follow us on  NUS.ENGINEERS
WHAT MAKES US DIFFERENT?

FUTURE-READY CURRICULA
Digitalisation is fast transforming engineering practice – our bold educational initiatives ensure you have the right knowledge and skills to thrive in the jobs of tomorrow.

EXPERIENTIAL LEARNING
Experience real-world engineering from your very first semester with hands-on exploration and experimentation. Test out design ideas in our makerspace and apply classroom learning on the job during compulsory internships.

DIFFERENTIATED PATHWAYS
Your engineering skills and knowledge are highly versatile, opening up a myriad of opportunities in industry, research or enterprise. Prepare for the career that best suits your strengths, interest and aspirations.

GLOBAL EXPOSURE
NUS has the largest number of partnerships for international student exchanges, including year-long programmes with both the Universities of Oxford and Cambridge! Furthermore, the unique NUS Overseas Colleges (NOC) offer an unparalleled experience working and studying in some of the most dynamic and vibrant start-up locations around the world.
WHAT'S NEW?

E-SCHOLARS (ENGINEERING SCHOLARS PROGRAMME)
As technology and society become more complex and intertwined, the world needs engineers who can see the big picture of all the connections, as well as understand the impact of technology on society and policy-making.

E-Scholars is a premier programme that provides an enhanced educational experience to nurture a new generation of innovators and technology leaders who are able to consider multi-faceted issues in a holistic manner.

Key Features:

• Bachelor of Engineering (BEng) degree in 3 years in any of the 10 BEng programmes
• Master’s in the 4th year in any NUS MSc programme, even those outside of engineering, e.g. from the NUS Business School
• Bond-free scholarship covering 4 years, with allowances for living expenses, computers and global experiences
• 2-year NUS University Town Residential College stay at RC4 (with focus on systems-thinking) or Cinnamon College (University Scholars’ Programme with focus on public policy and social issues)
• 6-month internship cum study stint at an NUS Overseas College (NOC)*
• 1-semester Student Exchange Programme (SEP)
• Opportunity to pursue an aspirational project for credit
• Dialogues with technology leaders
• Close mentorship by professors

* At locations where a 6-month programme is offered
Technology is increasingly shaping the way in which we work, think and live. At the heart of this transformation is digitalisation, where physical and virtual systems integrate, using a wealth of collected data to predict events and support decision-making. Today’s engineer need to understand how modern systems interact, how to efficiently select the most relevant and accurate information to use for the problem at hand, how to model, simulate and test scenarios virtually.

Get ready for the next Industrial Revolution with these exciting new courses:

**NEW MODULES**  
(For all engineering undergraduates)

- Systems-Thinking and Dynamics  
- Design and Prototyping  
- Machine Learning  
- Python Programming  
- Materials

**NEW SPECIALISATIONS**

- **Internet of Things:** learn how sensors and devices work and communicate with one another across wireless networks  
  (Available if you are applying to Computer Engineering or Electrical Engineering)

- **Robotics:** learn how robots move and are controlled, and how they interact with their surroundings and humans  
  (Available if you are applying to Biomedical Engineering, Computer Engineering, Electrical Engineering or Mechanical Engineering)

- **Digitalisation in Urban Infrastructure:** learn how virtual systems and data analytics enhance safety and improve urban planning and design  
  (Available if you are applying to Civil Engineering or Environmental Engineering)

Note: A specialisation in Aeronautical Engineering is also available if you are applying to Mechanical Engineering.

**NEW MINORS**

- **Data Engineering:** learn how to collect, curate, analyse and visualise useful data, while storing and keeping them safe  
  (Available if you are applying to Computer Engineering, Electrical Engineering or Industrial & Systems Engineering)

- **Infrastructure Management and Finance:** learn knowledge and skills to manage, invest and finance infrastructure projects  
  (Available if you are applying to Civil Engineering)
If you are undecided about which engineering discipline best suits your interests and abilities, the first year Common Engineering course allows you to keep your options open while providing you with a broad education in engineering fundamentals. This enables you to make a genuinely informed choice about the area in which to specialise from Year 2.

* Except for the Engineering Science Programme. Admission to the different disciplines after Year 1 will be based on merit.
Many other exciting opportunities are available to you when you apply to NUS Engineering, offering you a truly tailored educational experience.

INNOVATION AND DESIGN PROGRAMME (iDP) AS A SECOND MAJOR
iDP is one of the three differentiated pathways for engineering undergraduates who are keen to develop new ideas and products or pursue technopreneurship. Work on real-world projects around the themes of Intelligent Systems, Better Healthcare, Urban Mobility, Smarter Living and Sustainable Cities to address today’s urgent and emerging issues.

DOUBLE DEGREE PROGRAMMES
Double your advantage. Popular pairings include:
• Engineering* & Business Administration
• Engineering* & Economics
* All engineering programmes except Engineering Science.

DOUBLE MAJORS
Learn more so you can do more. Complementary double majors include:
• Innovation & Design (iDP)
• Management
• Systems Engineering (except ISE)
• Data Analytics (EE only)
• Mathematics (CEG only)
• Statistics (CEG only)

ENGINEERING AND MEDICINE TRACK
Offered together with the Duke-NUS Medical School, become a clinician whose background in engineering helps you to harness technological innovations for patient care.

MINORS
Broaden your knowledge and opportunities with useful minors, such as:
• Business Analytics (BME, EE, ISE, MSE & ME only)
• Business Analytics (BME, EE, ISE, MSE & ME only)
• Data Engineering (CEG, EE & ISE only)
• Economics
• Entrepreneurship (CEG only)
• Financial Mathematics (except BME, ESP & MSE)
• Information Security (BME, EE, ISE, MSE & ME only)
• Infrastructure Management and Finance (CE, CE only)
• Management
• Public Health (BME, CHE, EE, EVE & ISE only)
• Statistics (CEG only)
## APPLY TO NUS ENGINEERING

Apply online through the NUS Office of Admissions website: [www.nus.edu.sg/oam/](http://www.nus.edu.sg/oam/)

<table>
<thead>
<tr>
<th>B ENG PROGRAMME</th>
<th>DURATION (Years)</th>
<th>GCE ‘A’ Levels</th>
<th>International Baccalaureate Diploma</th>
<th>NUS High School Diploma</th>
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</thead>
<tbody>
<tr>
<td>Chemical Engineering</td>
<td>4</td>
<td>H2 Mathematics and H2 Physics* and H2 Chemistry</td>
<td>HL Mathematics and HL Physics** and HL Chemistry</td>
<td>Good Major CAP in Mathematics and Physics*** and Chemistry</td>
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<tr>
<td>Environmental Engineering</td>
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<tr>
<td>(Common) Engineering</td>
<td>4</td>
<td>H2 Mathematics and H2 Physics* or H2 Chemistry</td>
<td>HL Mathematics and HL Physics** or HL Chemistry</td>
<td>Good Major CAP in Mathematics and Physics*** or Chemistry</td>
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<tr>
<td>Biomedical Engineering#</td>
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<td>Civil Engineering</td>
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<td>Electrical Engineering</td>
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<tr>
<td>Industrial &amp; Systems Engineering</td>
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<td>Materials Science &amp; Engineering</td>
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<td>Mechanical Engineering</td>
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<tr>
<td>Computer Engineering</td>
<td>4</td>
<td>H2 Mathematics and H2 Physics* or H2 Chemistry or H2 Computing</td>
<td>HL Mathematics and HL Physics** or HL Computer Science</td>
<td>Good Major CAP in Mathematics and Physics*** or Chemistry</td>
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<tr>
<td>Engineering Science</td>
<td>4</td>
<td>H2 Mathematics and H2 Physics*</td>
<td>HL Mathematics and HL Physics**</td>
<td>Good Major CAP in Mathematics and Physics***</td>
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<td>Engineering~ &amp; Business Administration</td>
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<td>As above</td>
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<td>Engineering~ &amp; Economics</td>
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<td>Double degree in:</td>
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<tr>
<td>Double majors &amp; minors</td>
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<td>As above</td>
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<td>Special Programmes:</td>
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<tr>
<td>E-Scholars</td>
<td>3 + 1</td>
<td>As above⁺</td>
<td>As above⁺</td>
<td>As above⁺</td>
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<tr>
<td>Engineering &amp; Medicine Track</td>
<td>7 - 8</td>
<td>As above⁺</td>
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</table>

If you are a Polytechnic graduate, you should have a relevant and accredited diploma for the courses you wish to pursue. Please visit [www.nus.edu.sg/oam/apply-to-nus/polytechnic-diploma-from-singapore/subject-pre-requisites](http://www.nus.edu.sg/oam/apply-to-nus/polytechnic-diploma-from-singapore/subject-pre-requisites) for more details. If you have international qualifications, you may apply using equivalent high school results.

* Students without H1 or H2 Physics need to have an ‘O’ Level pass in Physics or its equivalent and would be required to take Physics bridging modules. ** Students without HL Physics would be required to take Physics bridging modules. *** Students without Major subject in Physics need to have an ‘O’ Level pass in Physics or its equivalent and would be required to take Physics bridging modules. * Students without H2/HL/Major Chemistry would be required to take Chemistry bridging module (CM1417) in the first year. ~ Double degree programmes are open to all Engineering programmes except Engineering Science. * Selection test and/or interviews required.