GUIDE TO CHOOSING AN UNDERGRADUATE PROGRAMME FROM NTU COLLEGE OF ENGINEERING (CoE)

1. Choose your preferred single degree programme from the 14 OPTIONS available!

   **Like MATH and SCIENCE?**
   
   **YES**
   
   **NO**
   
   Meet these requirements?
   
   • Pass in H1/O Level Physics, or
   • Physics at Standard Level or equivalent, or
   • Overall Cap of 2.0 in Physics, or
   • Junior High School Level Physics
   
   Fret not! There are 5 programmes that you can choose from.

2. Challenge yourself further. Take up a MINOR, SECOND MAJOR or pursue a DOUBLE DEGREE.

   **MINORS**
   
   Choose from a range of minors that complement your single degree programme.

   To find out more, visit: www.ntu.edu.sg/minors

   **SECOND MAJORS**
   
   Consider adding breadth to your single degree programme by taking an additional Major.

   To find out more about our Second Major below.

   **DOUBLE DEGREES**
   
   Double in degree if you wish! Further your studies in another major.

   Check out our double degree programmes below.

3. Meet these requirements?

   • Physics at Standard Level or equivalent, or
   • Overall Cap of 2.0 in Physics, or
   • Junior High School Level Physics

   Fret not! There are 9 programmes that you are spoilt for choice!

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<td><strong>BIOENGINEERING</strong></td>
<td>A hybrid engineer equipped with a strong grasp of life sciences and engineering knowledge, you will solve real-world problems in the health and biomedical sectors.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/bioengineering">www.ntu.edu.sg/bioengineering</a></td>
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<tr>
<td><strong>COMPUTER SCIENCE</strong></td>
<td>Acquire in-depth knowledge on software design and construction with emphasis on developing effective software and understanding the functional and non-functional features of the hardware required.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/computer-science">www.ntu.edu.sg/computer-science</a></td>
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<tr>
<td><strong>DATA SCIENCE AND ARTIFICIAL INTELLIGENCE</strong></td>
<td>Diploma in computer science, information technology, and mathematics, you will be ready to solve real-world problems as data scientists.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/data-science">www.ntu.edu.sg/data-science</a></td>
</tr>
<tr>
<td><strong>MATH and SCIENCE?</strong></td>
<td>A distinctive fusion of computer engineering and electronics focusing on making your study of programming to build new computing platforms and technology.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/aerospace">www.ntu.edu.sg/aerospace</a></td>
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<td><strong>ELECTRICAL AND ELECTRONIC ENGINEERING</strong></td>
<td>Directly the world as you revolutionise how people connect and empower future technologies.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/electrical-electronic">www.ntu.edu.sg/electrical-electronic</a></td>
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<td><strong>INFORMATION ENGINEERING AND MEDIA</strong></td>
<td>Marry your love of coding with an emphasis on applying your creativity and designing a media technology.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/information-media">www.ntu.edu.sg/information-media</a></td>
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<tr>
<td><strong>CHEMICAL AND BIOLOGICAL ENGINEERING</strong></td>
<td>Acquire the ability to manage projects in chemical, industrial, and plant engineering careers.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/chemical-biological">www.ntu.edu.sg/chemical-biological</a></td>
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<tr>
<td><strong>MECHANICAL ENGINEERING</strong></td>
<td>Master the mechanical and technical skills needed to design, develop, and manufacture products.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/mechanical">www.ntu.edu.sg/mechanical</a></td>
</tr>
<tr>
<td><strong>CIVIL ENGINEERING</strong></td>
<td>Trained in a distinctive fusion of computer engineering and electronics focusing on making your study of programming to build new computing platforms and technology.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/civil">www.ntu.edu.sg/civil</a></td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL ENGINEERING</strong></td>
<td>Environmental engineers world leaders in environmental protection and restoration.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/environmental">www.ntu.edu.sg/environmental</a></td>
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<tr>
<td><strong>MATERIALS ENGINEERING</strong></td>
<td>Materials are fundamental to industries today and the future economy. Be part of this revolution and engineering material.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/materials">www.ntu.edu.sg/materials</a></td>
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<td><strong>MARITIME STUDIES</strong></td>
<td>Master the skills of management and leadership inherent in Business Studies.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/nbsdd">www.ntu.edu.sg/nbsdd</a></td>
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<tr>
<td><strong>SECOND MAJOR IN BUSINESS</strong></td>
<td>Combine the technical competencies of your Engineering or Marine Studies major with the soft skills of management and leadership inherent in Business Studies.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/mis">www.ntu.edu.sg/mis</a></td>
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<td><strong>SECOND MAJOR IN FOOD SCIENCE AND TECHNOLOGY</strong></td>
<td>Develop modern technologies for urban farming, make food longer-lasting and safe for consumption, convert food waste into high-value food ingredients and increase environmental sustainability.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/eftst">www.ntu.edu.sg/eftst</a></td>
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<td><strong>SECOND MAJOR IN MEDICAL BIOLOGY</strong></td>
<td>Master materials derived from and designed for biological systems; and pursue your interest in biology-centred materials and devices.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/medbio">www.ntu.edu.sg/medbio</a></td>
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<tr>
<td><strong>SECOND MAJOR IN PHARMACEUTICAL ENGINEERING</strong></td>
<td>Be proficient in the latest in the pharmaceutical and healthcare industry's fundamental of knowledge in both biodiversity and materials science.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/pharma">www.ntu.edu.sg/pharma</a></td>
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<tr>
<td><strong>SECOND MAJOR IN SOCIETY AND URBAN SYSTEM</strong></td>
<td>Engineer better societies and sustainable urban environments to improve the quality of life for people.</td>
<td>For more information, visit: <a href="http://www.ntu.edu.sg/sus">www.ntu.edu.sg/sus</a></td>
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*If you are taking Biomedical Engineering with a Second Major in Pharmaceutical Engineering or Second Major in Food Science and Technology, you will require at least a pass in H1/O Level Physics, Standard Level Physics, Junior High School Level Physics, or an overall Cap of 2.0 in Physics.

**Denotes Bachelor of Science programme.**
**Programmes (Direct Honours)**

**Bachelor of Engineering (B.Eng) Programmes**
- Aerospace Engineering
- Chemical and Biomolecular Engineering
- Civil Engineering
- Computer Engineering
- Electrical and Electronic Engineering
- Engineering
- Environmental Engineering
- Mechanical Engineering
- Bioengineering
- Computer Science
- Materials Engineering
- Engineering with a Minor in Business
- Engineering with a Minor in International Trading

**Bachelor of Science (B.Sc) Programmes**
- Data Science and Artificial Intelligence
- Mathematical and Computer Sciences (Double Major)
- Maritime Studies

**Double Degree Programmes**
- Bachelor of Engineering (Computer Engineering) and Bachelor of Business (with specialisation in Business Analytics)
- Bachelor of Engineering (Computer Science) and Bachelor of Business (with specialisation in Business Analytics)
- Bachelor of Engineering in your chosen major and Bachelor of Arts (Honors) in Economics

**Second Majors**
- Bachelor of Engineering in your chosen major with a Second Major in Business
- Bachelor of Engineering in Bioengineering/Chemical and Biomolecular Engineering with a Second Major in Food Science and Technology
- Bachelor of Engineering in Materials Engineering with a Second Major in Medical Biology
- Bachelor of Engineering in Bioengineering with a Second Major in Pharmaceutical Engineering
- Bachelor of Engineering in Chemical Engineering with a Second Major in Environmental Engineering
- Bachelor of Science in Maritime Studies with a Second Major in Business

**Part-Time Bachelor of Engineering (B.Eng) Programmes**
- Computer Science
- Electrical and Electronic Engineering
- Mechanical Engineering

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### Minimum Subject Requirements

#### Bachelor of Engineering (B.Eng) Programmes

<table>
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<th>Duration (Years)</th>
<th>Singapore-Cambridge GCE 'A' Level</th>
<th>International Baccalaureate Diploma</th>
<th>NUS High School Diploma</th>
<th>International and Other Qualifications</th>
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<td>6</td>
<td>• Pass in H2 Level Mathematics, and • Pass in H2 Level Biology/Chemistry/Computer Science/Physics, and • Pass in H1/0' Level Physics 1 or equivalent</td>
<td>• Pass in Higher Level Mathematics, and • Pass in Higher Level Biology/Chemistry/Computer Science/Physics, and • Pass in Standard Level Physics 2 or equivalent</td>
<td>• Major CAP of 2.0 in Mathematics, and • Major CAP of 2.0 in Biology/Chemistry/Physics, and • Overall CAP of 2.0 in Physics 3 or equivalent</td>
<td>• Pass in Senior High School Level Mathematics, and • Pass in Senior High School Level Biology/Chemistry/Physics, and • Pass in Junior High School Level Physics 4</td>
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</table>

Please refer to the minimum subject requirements for the respective single degree Engineering programmes stated above.

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### Notes
- Pass in H1/0' Level Physics 1 is only applicable to applicants who have not read H2 Level Physics.
- Overall CAP of 2.0 in Physics 3 is only applicable to applicants who have not majored in Physics.
- Overall CAP of 2.0 in Physics 4 is only applicable to applicants who have not read Senior High School Level Physics.

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The information contained in this leaflet is correct as of 31 December 2019. The university reserves the rights to update it from time to time. Please refer to the College’s and Schools’ websites for updates.