CN Yang Scholars Programme
MESSAGE FROM THE DIRECTOR

Curiosity is probably the most conspicuous characteristic of an intellect. Great scientists and engineers ask unprecedented questions and break boundaries, all due to this insatiable passion. However, this alone is sometimes insufficient. Great scientists and engineers are also doers; dexterity is often required to make things happen. With both curiosity and dexterity, unlimited potential and possibilities will be released.

We have a unique interdisciplinary curriculum that allows our scholars to be well trained in a broad range of sciences. Our scholars are then exposed to vast opportunities to learn and apply their knowledge to practical problems. They are encouraged to think creatively and express their ideas individually and as a team. We give every scholar limitless opportunities for personal growth, enriching and molding them into intellectuals. Our scholars will have the chance to work on cutting edge research projects in different fields, as well as meeting some of the greatest scientists and engineers alive. As iron sharpens iron, interactions with world-class scientists and engineers will burnish their ideas and intellectual capabilities.

Since 2006, our doors have been opened to the brightest of minds that are passionate about science and engineering. We want you! I hope you may be part of our company of stars and illustrious alumni.

Assoc Prof Tan Choon Hong
Director of CN Yang Scholars Programme
WHY CHOOSE CN YANG SCHOLARS PROGRAMME?

The CN Yang Scholars Programme is one of the premier undergraduate programmes for science and engineering students at Nanyang Technological University. The programme is specially designed for exceptional students with a deep passion in science and engineering for the high-technology world of the 21st century. The programme provides a strong and broad foundation in the basics of science, mathematics and engineering so as to empower the students to delve deeper into any discipline in science and engineering. Students are given unique opportunities to broaden their experience by being engaged in cutting edge research within NTU as well as reputable overseas universities.

At the end of their undergraduate studies, CNYSP graduates are also given an option to pursue postgraduate studies (PhD) with a scholarship.

SCHOLARSHIP AWARDS

- Candidates must excel academically and possess strong passion in research.
- Successful candidates will be offered the Nanyang Scholarship from NTU.

INTERDISCIPLINARY CURRICULUM

- Flexible curriculum with strong and broad foundation in mathematics and sciences.
RESEARCH OPPORTUNITIES

- Opportunity for research attachment at NTU institutes or industrial laboratories.
- Overseas final year project at reputable universities.
- Opportunity for PhD study (optional).

RESIDENTIAL EXPERIENCE

- Guaranteed four years of stay in NTU halls of residence.
- Multi-disciplinary and group research at Crescent Hall Garage.

GLOBAL EXCHANGE

- Opportunity to gain global experience in reputable overseas universities.
- Guaranteed overseas exchange for one semester with travel grant of S$5,000.

MEETING NOBEL LAUREATES AND WORLD CLASS LEADERS

- Opportunity to meet Nobel Laureates and world class leaders through various Eminent Speakers Series, seminars and workshops.

ACADEMIC GUIDANCE BY CNYSPE ALUMNI

- Every student will be assigned a mentor who will provide guidance for the student’s whole academic programme at NTU.
NANYANG SCHOLARSHIP
The Nanyang Scholarship will be awarded to successful applicants. The benefits of the Nanyang Scholarship are:

- Subsidised tuition fees (after Tuition Grant) will be fully covered
- Living allowance of S$6,000 per annum
- Book allowance of S$500 per annum
- Accommodation allowance up to S$2,000 per annum (for scholars who reside in NTU hostels only)
- Travel grant of S$5,000 for overseas study/exchange programme (One-off)
- Computer allowance of S$1,500 (One-off)
- Settling in allowance of S$250 (One-off)

No bond is attached to the Nanyang Scholarship apart from the three-year bond applicable to all Singapore PRs and international students under the MOE Tuition Grant Scheme.

Recipients of other scholarships are eligible to apply for the CN Yang Scholars Programme.

CN Yang Scholars are required to maintain a satisfactory CGPA (Cumulative Grade Point Average) of 3.5 over 5.0. Academic performance is monitored on a semester basis.
CURRICULUM AT A GLANCE

- Year 1 curriculum with multi-disciplinary courses such as Biology, Chemistry, Mathematics, Physics, Computing, Climate Science and Research Experience.
- Pre-research training as early as year one through Introductory Research Methodology.
- Residential learning experience through Introductory Research Methodology and Project at Garage at Crespion Halls.
- Research attachment for two continuous semesters at NTU research institutes or external laboratories.
- Overseas final year project (within 8 months).
- Second major in other science programmes (optional for students from science programmes).
- Courses from University Scholars Programme (USP) such as Writing and Reasoning, Ethics and Enterprise, Innovation & Leadership.
- PhD at NTU or Joint PhD with partner university (optional). Minimum CGPA of 4.00 for application of a scholarship from NTU.

AT A GLANCE

- Courses from University Scholars Programme (USP) such as Writing and Reasoning, Ethics and Enterprise, Innovation & Leadership.
- PhD at NTU or Joint PhD with partner university (optional). Minimum CGPA of 4.00 for application of a scholarship from NTU.
### Curriculum Overview for Science (138 AUs)

<table>
<thead>
<tr>
<th>Year 1, Semester 1</th>
<th>Introductory Biology (3 AU)</th>
<th>Principles of Modern Chemistry (3 AU)</th>
<th>Mathematics I (4 AU)</th>
<th>Physics (3 AU)</th>
<th>Intro Research Methodology (3 AU)</th>
<th>Algorithms &amp; Computing I (2 AU)</th>
<th>Absolute Basics for Career (1 AU)</th>
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<tr>
<td>Year 1, Semester 2</td>
<td>Research Experience (3 AU)</td>
<td>Mathematics II (4 AU)</td>
<td>Relativity and Quantum Physics (3 AU)</td>
<td>Climate Science (3 AU)</td>
<td>School Core / Major PE (3 AU)</td>
<td>School Core / Major PE (3 AU)</td>
<td>Career Power Up (1 AU)</td>
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<td>Year 1, Special Term</td>
<td>Overseas Trip (Educational)</td>
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<td>Unrestricted Elective (3 AU)</td>
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<td>Writing and Reasoning (3 AU)</td>
<td>Sustainability (1 AU)</td>
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<td>Year 2, Semester 2</td>
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<tr>
<td>Year 3, Semester 1</td>
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<td>Research Attachment 2 (4 AU)</td>
<td>Unrestricted Elective (3 AU)</td>
<td>Enterprise &amp; Leadership (3 AU)</td>
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<td>Year 5, 6 and 7</td>
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<td>Joint PhD at NTU / Overseas (Optional)</td>
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**Final Year Project 1 at NTU / Overseas (12 AU) (For students without Professional Attachment)**
### Curriculum Overview for Engineering (139 AUs)

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<td>Final Year Project 2 at NTU / Overseas (8 AU) (For students with Professional Attachment)</td>
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RESIDENTIAL EXPERIENCE
AT CRESCENT HALL & GARAGE
The CNYSP provides scholars an opportunity to pursue independent research in NTU from Year 1 onwards.

Scholars can continue the research attachment and receive monetary allowance at the rate of $8 per hour, capped at 600 hours per academic year.

Scholars will be given an opportunity for overseas research attachment.

Research Publication by the Scholars

- Effect of dielectrophoresis on spermatozoa
- Multifunctional graphene quantum dot-conjugated titanate nanoflowers for fluorescence-trackable targeted drug delivery
OVERSEAS RESEARCH ATTACHMENT

“CNYS shaped my life as it provides me with countless opportunities to challenge myself. It provides me with the necessary knowledge to appreciate the inter-connectedness of sciences that is present in most research. I was partially funded by CNYS to do research in Ecole Polytechnique, France and it played a big part in making this possible. I worked on Endothelial Cell Migration under induced flow, a classic example of cross discipline research across biology and physics, the interdisciplinary aspect of CNYS gave me an edge in this field of study. All in all, the training and confidence I gained from the programme has showed me the endless possibilities one can strive for after graduation.”

CHENG SHENG DA JOWELL
CN Yang Scholar from Aerospace Engineering
I would like to thank CN Yang Scholars Programme for the generous sponsorship which allowed me to attend Gordon Conference Biopolymers 2014. It was indeed an enriching and wonderful experience.

LOW MAN TING, CASSIA
CN Yang Scholar from Chemistry & Biological Chemistry
A CONVERSATION WITH PROFESSOR CN YANG

“He stressed the fact that we should strive to find something that interests us instead of simply following what our supervisors are doing. In his opinion, our early education (right from primary school till high school) should give us some clues about our inclinations even if we may not know the exact thing we want – realizing that inclination and push towards it is one important step in doing any research or embarking on similar journeys.”

ERICKSON TJOA
CN Yang Scholar from Physics with Second Major in Mathematical Sciences

“He encouraged us to not be afraid of the prospect of working in the field of theoretical sciences because its range of development, contrary to what most may think, is indeed extremely large. As student aspiring to be a theoretical physicist, on the one hand, I feel motivated to continue pursuing my dream.”

NG CHYI HUEY
CN Yang Scholar from Mechanical Engineering
The CN Yang Scholars’ Club is an exclusive club managed by and designed for the scholars in the CN Yang Scholars Programme. Their main roles are to foster close ties between the scholars, to promote the CNYSP and to look after the welfare of the scholars themselves.

These objectives are achieved mainly through events specially created by the executive committee of the club. Some examples of such events are the freshmen orientation camp, annual dinner and dance, overseas educational trip, regular outings and even exam welfare packages.

As the community of CN Yang Scholars hail from all over the world, the club strives to encourage cross-cultural exchange and interaction through its many activities which are open to all its members. More information and highlights of our club can be found from our Facebook page at https://www.facebook.com/CNYangScholars
The Kyushu trip organised by the CN Yang Scholars’ Club provided me with the opportunity to visit Japan for the first time, indulging in their culture, food and technology. The unique blend of both educational and cultural exposures made the trip very unconventional in nature, with the usual touristy attractions interlaced with factory visits.

The exchange with both students in Kyushu University and also the researchers in AIST Kyushu allowed me to draw many parallels with Singapore education. One of the interesting points I took away was the fact that research for both agriculture and livestock was a domain heavily focused by the Japanese. This was due to Japan having a robust agricultural sector, and any improvements to process efficiency and even quality of life would go a long way into the future for the people working in the sector and also the country.

TAN PENG YU SAMUEL
CN Yang Scholar from Aerospace Engineering