I ♥ RESEARCH

Novel ⚒ Real ⚒ Progressive

Last updated: 24 January 2022
About NRP and NRPjr

Nanyang Research Programme - NRP

The Nanyang Research Programme (NRP) is an NTU outreach programme for students from the IP (Integrated Programme) Schools and Junior Colleges. It offers a variety of research topics from NTU’s four Colleges – College of Engineering, College of Science, College of Humanities, Arts, & Social Sciences, and College of Business – as well as the National Institute of Education.

The programme targets JC1 / IP Year 5 students. These students will undertake 8 months of research activities stretching from April to December, either individually or in a pair, under the charge of an NTU faculty member.

As a culmination of their research, students will be required to submit an academic research paper. They will also be required to present and defend their research findings to their NRP Supervisor and an independent assessor who are experts in that area of research.

Nanyang Research Programme (Junior Researcher) – NRPjr

The Nanyang Research Programme (Junior Researcher) / NRPjr is a sister programme to the NRP.

It is targeted at Secondary 3 students in selected MOE Secondary Schools, and Year 3 and 4 students in all IP Schools. Similarly, it offers research topics from NTU’s four Colleges – College of Engineering, College of Science, College of Humanities, Arts, & Social Sciences, and College of Business – as well as the National Institute of Education.

Students will be required to partake in 8 months of research work, followed by the submission of a research paper, and an oral presentation to their NRPjr Supervisor and another domain expert.
At the end of the NRP/NRP\textsubscript{jr} application period, all completed applications received will first be routed back to the applicant’s school for endorsement. Only students who have had their applications endorsed and recommended by their school will be considered for shortlisting and selection.

Endorsed applications will then be routed to the respective project Supervisors for their shortlisting and selection. It is at the discretion of the respective project Supervisors to decide if he/she might wish to contact student applicants for an interview prior to final selection.
Projects offered under the NRP and NRP\textit{jr} provide an invaluable opportunity for students to dabble, delve, discover, and deepen their knowledge in the areas that interest them.

The projects are classified into the following three categories:

**ENGINEERING**
- Aerospace Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Science & Computer Engineering
- Electrical & Electronic Engineering
- Environmental Engineering
- Materials Science & Engineering
- Mechanical Engineering

**SCIENCES**
- Biology
- Chemistry
- Environmental Earth Science
- Mathematics
- Physics
- Sports Science

**BUSINESS, HUMANITIES, ARTS & SOCIAL SCIENCES**
- Art, Design & Media
- Humanities
- Social Sciences
- Business
- Communication & Information
- Education
Offering NRP as H3 Science Research (only applicable to Yr 5/JC1 students taking the GCE A-Level)

IP Year 5 and JC1 students taking the GCE A-Level Examination in IP Year 6 / JC2 can opt to offer NRP as an NTU-H3 Science Research project, subject to endorsement from the student’s school as well as the NRP Supervisor.

Only projects in the Engineering and Sciences categories can be offered as NTU-H3 Science Research. Students who opt to offer their project under the umbrella of H3 Science Research will be awarded a grade along with their other examinable subjects at the GCE A-Level Examination. The H3 Science Research grade will only be made known during the release of the GCE A-Level results following the completion of their Pre-Tertiary education.

An offer of H3 Science Research will only be made if:

a) The student has indicated his/her intention at the point of application; and
b) He/She has been recommended by his/her school for H3 Science Research – if the school has made a recommendation for NRP Enrichment only, NTU will make an offer for NRP Enrichment only, even if the student has indicated on his/her application form that he/she wishes to offer the project as H3 Science Research.

Two other considerations can however supersede the student’s school’s recommendation:

i) If the project articulates upfront that pair work is a requirement - this would automatically mean that the project cannot be offered as an H3 Science Research project as H3 Science Research necessitates that students work on their projects as individuals; and/or
ii) If the project Supervisor thinks that the student is better suited to work on the project as NRP Enrichment only.

As a general rule, as long as the school has recommended a student for H3 Science Research, NTU will make an offer of H3 Science Research to the student unless one or both of the conditions listed in (i) and (ii) (above) apply.

Once an offer for NRP Enrichment has been made, conversions to H3 Science Research will not be allowed.

After an offer for H3 Science Research has been made in March, students will be asked to confirm their decision in July. A course fee of S$60 will apply once students confirm their decision.

Students who withdraw from H3 Science Research after the official withdrawal period will forfeit the application fee. Students will also have an “Absent” grade reflected on their GCE A-Level certificate. They may still opt to continue with their project under NRP Enrichment after withdrawing from H3 Science Research.
# Comparison of NRP, NRP\textsubscript{jr} and H3 Science Research

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<th><strong>NRP/ H3 Science Research</strong></th>
<th><strong>NRP\textsubscript{jr}</strong></th>
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<td><strong>Target Audience</strong></td>
<td>JC1 / IP Year 5</td>
<td>Secondary 3 / IP Year 3 &amp; 4</td>
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<tr>
<td><strong>Age Group</strong></td>
<td>17 years old</td>
<td>15 – 16 years old</td>
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<tr>
<td><strong>Duration</strong></td>
<td>12 months (April to March)</td>
<td>12 months (April to March)</td>
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<tr>
<td><strong>Group Size</strong></td>
<td>H3: Individual</td>
<td>Pair Work (same school)</td>
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<td></td>
<td>NRP: Individual / Pair Work</td>
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<tr>
<td><strong>Supervisor</strong></td>
<td>NTU Faculty / NIE Faculty</td>
<td>NTU Faculty / NIE Faculty</td>
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<tr>
<td><strong>Teacher Mentor</strong></td>
<td>Optional</td>
<td>1 teacher mentor per pair</td>
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<td><strong>Assessment Components</strong></td>
<td>• Process (Research Disposition)</td>
<td>• Process (Research Disposition)</td>
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<td>• Product (Research Paper)</td>
<td>• Product (Research Paper)</td>
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<td></td>
<td>• Presentation (Oral Presentation &amp; Defence)</td>
<td>• Presentation (Oral Presentation &amp; Defence)</td>
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<td><strong>Recommended Contact Hours</strong></td>
<td>• Research (NRP: 120 hours / H3: 170 hours)</td>
<td>• Research (120 hours)</td>
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<td>• Research Paper &amp; Oral Presentation (NRP: 20 hours / H3: 30 hours)</td>
<td>• Research Paper &amp; Oral Presentation (20 hours)</td>
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## NRP/ NRP\textsubscript{jr}
- Enrichment
- Gold Silver Bronze Participation

## H3 Science Research
- GCE A-Level Examinable Subject
- Distinction Merit Pass Ungraded
Role of the NRP / NRP Jr Supervisor

1. To interview and select students to work on the proposed research topic.
2. To ensure sufficient contact hours between the student and yourself.
3. To coach and guide students under your charge throughout the research period.
4. To ensure students are given sufficient exposure to research work in the laboratories (applicable to projects which require laboratory-based research).
5. To ensure a safe work environment for the students to conduct laboratory experiments/activities (applicable to projects which require laboratory-based research).
6. To monitor and provide feedback on the student’s attendance and progress through the course of the programme.
7. To ensure that students keep a proper record of their work progress as well as a record of their attendance. Students are to submit a Monthly Progress Report to their Teacher Coordinator. They are also to complete their Attendance Log and have that signed each time they head down to NTU for any laboratory work and project discussion.
8. To grade and write an assessment report for the following: Research Process, Research Paper and Oral Presentation.