

### SCIENCE RESEARCH PROGRAMME (SRP) 2024/25

#### ORGANISATION

The Science Research Programme (SRP) was established in 1988 by the Faculty of Science, National University of Singapore (NUS) in collaboration with the Gifted Education Branch, Ministry of Education. In the current cycle, mentors for the Programme come from the National University of Singapore's Faculty of Science, Faculty of Engineering, and Yong Loo Lin School of Medicine; A\*STAR's Genome Institute of Singapore (GIS), Institute of Molecular and Cell Biology (IMCB), NanoBio Lab, Singapore Institute for Clinical Sciences (SCIS) and Singapore Institute of Food and Biotechnology (SIFB); Defence Science Organisation (DSO) National Laboratories; Defence Science and Technology Agency (DSTA) Nanyang Technological University (NTU); Raffles Science Institute (RSI); and Singapore University of Technology and Design (SUTD).

#### OBJECTIVE

The main objective of the Programme is to give selected first-year Junior College/Year 5 Integrated Programme students who have demonstrated interest and aptitude for scientific research, the opportunity to be in a mentorship and undertake research projects in a scientific and technological community, acquiring critical inquiry and research competencies, and desirable dispositions of practitioners in the scientific field.

#### PROGRAMME

The Programme comprises 2 parts:

- Mentorship Attachment
- Science Research Congress

**The Mentorship Attachment** offers students the opportunity to work on research projects in Life/Medical Sciences, Chemical/Physical Sciences, and Engineering under the guidance of mentors from NUS and other established research centres. Students work in a real-world research environment.

During the mentorship attachment in May/June, the student spends *at least* 2 weeks working full-time on the research project.

Thereafter, the student meets with the mentor on a regular basis to complete the research work. Every student writes a scientific paper at the end of the Attachment. The papers will be published as Proceedings of the 37<sup>th</sup> Science Research Congress.

**The Science Research Congress** which will be held in April 2025 offers students an opportunity to communicate their research findings to an audience of mentors and interested JC students. On the successful completion of the Attachment, certificates of participation in the SRP 2024/25 will be presented to the students at the Congress.

Since 2006, the student in the SRP may submit his/her research project for assessment as a H3 subject. Students offering H3-SRP would have to submit their scientific papers for H3 assessment in January 2025 and take part in an oral defence in late February 2025.

### ADMISSION CRITERIA

Interested eligible JC1 H2 and Year 5 IP science students should first apply to participate in the Research Methods Module (RMM).

#### Shortlisting criteria for participation in RMM

About 140 students will be shortlisted for participation in the RMM based on:

- Strong academic performance;
- Interest demonstrated in scientific research-related activities in Secondary School; and
- JC or IP School Principal's recommendation.

#### Admission criteria to SRP 2024/25

The admission criteria include:

- Successful completion of Research Methods Module (RMM),
- Attendance at the 36<sup>th</sup> Science Research Congress, and
- Acceptance of an approved Research Plan by a mentor.

### RESEARCH METHODS MODULE (RMM)

The RMM will be accessible online during the last week of March to the first two weeks of April. Students are introduced to the library resources available on-campus, basic laboratory safety, ethics in research and gain some insights into the current R&D available in participating departments/research centres in NUS. Students who intend to proceed to SRP 2024/25 then identify a self-selected research topic, perform background literature search and formulate a viable research plan.

On completion of the RMM and attendance at the 36<sup>th</sup> Research Congress, students interested to proceed with the Mentorship Attachment and Science Research Congress may then submit a Research Plan to a prospective mentor and apply for admission to SRP 2024/25 in May. On acceptance of the Research Plan approved by either a H3-SRP supervisor or an Enrichment-SRP mentor, they qualify as participants of the SRP 2024/25.

### TIME FRAME FOR RMM

22 Mar -20 Apr 24	Complete the Research Methods Module (RMM)
27 Apr 24	Attend 36 <sup>th</sup> Science Research Congress (Part 1) Face-to-Face
3 May 24	Attend 36 <sup>th</sup> Science Research Congress (Part 2) Virtual

### TIME FRAME FOR SRP 2024/25

By end May '23	Apply for SRP 2024/25
Jun '24	Attend <i>at least</i> 2-week Full-time Attachment during the vacation
Jun – Nov '24	Work on research projects
Mid Aug '24	Register H3-Science Research projects (if applicable)
Mid Jan '25	Submit H3- and Enrichment-SRP scientific papers & abstracts
Late Feb '25	Oral Defence by H3-SRPians 2024/25
Late Apr '25	Presentations by Enrichment-SRPians 2024/25 at the 37 <sup>th</sup> Science Research Congress

**APPLICATION PROCEDURES FOR RESEARCH METHODS MODULE (RMM)**

To Student,

1. Prepare the following information beforehand:

A. Questions:

- i. What do you hope to achieve as a participant in RMM? (max: 100 words)
- ii. What are your long-term career goals? (max: 100 words)

B. Details of participation in science / engineering / mathematics-related activities:  
(Up to 6 per category from Sec/Year 1 to 4)

- i. Mentorship Attachment (State the Programme, Institution/Organisation/Dept and Year)
- ii. Science & Engineering Fair/Science Fair/Project Work (State title of project, award and year obtained)
- iii. Bio/Chem/Informatics/Math/Phys Competition and Olympiad (State highest grade/award and year obtained)
- iv. Tan Kah Kee Young Inventors' Competition and/or Innovation Programme (IvP) Fair (State title of product, award/prize and year obtained)

2. Apply online at <https://go.gov.sg/srprmm24> between **10 Feb** and **20 Feb 2024**.

- A. Your college/school may require you to submit the completed form in hardcopy for approval and validation.
- B. You may download the form from <https://go.gov.sg/gebsrp/> (under the Registration tab) and submit the completed form to your college/school liaison teacher, *latest*, by **Tues, 20 Feb 2024**.