

Warning

Make sure you are viewing the correct slide deck (**blue highlights**) that is applicable to the semester for which you are considering starting UROP, as requirements may change.

This deck is for **AY 23/24 Sem 1**, presented on **4 October 2023**, for prospective UROP students formally starting in **January 2024**.



From: uiowa.edu



From: yumc.com



NUS SoC UROP Briefing

AY 2023/2024 Sem 1

Presented by Dr Zhao Jin
Assisted by Ms Ivy Ng
(Revised 8 September 2023)

Objective

Allows undergraduates to participate in active research and to experience first hand the challenges and exhilaration of research, discovery and invention.



Typical Activities

- Problem formulation;
- Literature survey;
- Attending research seminars;
- Proposal and implementation of solutions and evaluation; and
- Documentation and presentation of results.

Feedback from UROP Students



The UROP programme is an amazing opportunity for anyone interested in pursuing further studies or a career in academia. The programme gave me the chance to choose a topic that I was genuinely interested in and to study it in-depth. It also helped me to better understand the non-technical skills needed to make a good researcher such as what makes a good research paper and how to present the results of your research. During the entire course of the programme, I was given a great deal of guidance and support from not only my supervisor but also from the postdocs and phd students in the research group.

You Only Spike Once: Improving Energy-Efficient Neuromorphic Inference to ANN-Level Accuracy

Supervisor: Trevor Erik

Feedback from Faculties



We have been extremely happy with the work that we have done with our UROP students. Together, I work to treat our researchers as close member of our team, and through collaboration and drive by the students, we have published papers and our work has formed the basis of new research projects. Together, we have built new AI accelerator hardware and designed new AI algorithms to improve the speed and efficiency of AI systems. Overall, I've been very impressed by the work the students can accomplish, and they have, and will continue to make an impact as a part of our research group.

Important Considerations

- UROP must be done in **2 consecutive semesters**.
- UROP students are **not** allowed to go for internships / exchange during UROP.
- Alternatives to UROP
 - UG Summer Research Programme (3 months during vacation)
 - CP3106 Independent Project (one semester)

Prerequisites

- Be an SoC student
- Have at least 60 (in-progress / completed) Units at the point of applying
- Attain a minimum GPA of 3.8.

Application Process

- Apply one semester in advance
 - Apply this semester to start your UROP in AY23/24 Semester 2.
- Secure a research project and a supervisor
- Submit your application between **11 October and 17 November 2023** via [this form](#).

(You will be informed via email once your application is processed.)

Finding a Project and a Supervisor

- Browse the UROP proposals at <https://mysoc.nus.edu.sg/~projadm/> (Presentation Sem: AY2024/2025 Semester 1)
- Shortlist a few projects based on your interests and background
- Talk to the faculties for more details and get an approval from them

Past Year Examples

U0791130	SciWING Scholar Document Processing Platform	KAN Min Yen
U0791140	Dataset Extraction from Scientific Documents	KAN Min Yen
U045130	Genome assembly	SUNG WING KIN
U130030	Emerging Security Problems in WebAssembly and Binaries	LIANG Zhenkai
U271050	SimBricks: modular simulation framework for end-to-end network system evaluation	LI Jialin
U148290	Active Learning for Model Robustness	LOW Kian Hsiang
U148300	Collaborative Machine Learning with Model Robustness	LOW Kian Hsiang

If You Can't Find a Suitable Project...

- Look through all project lists (UROP / FYP / CP4106, any semester)
- Find faculties whose projects / research areas are you are interested in.
- Talk to them to see if they can propose something suitable for you.

If You Can't Find a Suitable Project...

- Alternatively, [propose your own project](#) and find a faculty to supervise you.

Bottom line: Take the initiative to find the best project and supervisor that fits your interests and advising style

Timelines

Activity	Deadlines
1. Continuous Assessment	
CA Report Submission	Wed, Week 12, Sem 1
Presentation	Reading Week, Sem 1
2. Final Assessment	
Final Report Submission	Wed of Week 12, Sem 2
Presentation	Reading Week, Sem 2
3. Additional Submissions	
Feedback of UROP Guidance and Evaluation	First Mon after Exams, Sem 2
e-copy of Final Report	

Evaluation

30% Continuous Assessment (Interim Progress Report)

15% Supervisor	30% Understanding of the problem
15% Main Evaluator	40% Technical Achievement
	10% Project and Resource Management
	20% Report and Discussion

70% Final report & Oral Presentation

35% Supervisor	20% Understanding and formulation of the problem
35% Main Evaluator	10% Extension of knowledge
	30% Methodology, Implementation and Analysis
	20% Report
	20% Effort & Initiative

If the supervisor and main evaluator agrees that the student can continue the project, you will be automatically registered for CP3209 next semester; and will receive an 'IP' grade for this semester.

Funding Support

From SoC: Up to **S\$200** per student for small amounts of computational resources, hardware, software or stationery.

- Readily available on a first-come-first basis.

From NUS: Up to **S\$2500** per student to reimburse costs for the proposed research

- Part of the Research Experience Programme (REx) to be rolled out in future.
- Additional application, workshop attendance and evaluation required.

Contact Information

SoC UROP Website: http://www.comp.nus.edu.sg/undergraduates/urop_project.html

FAQ: <https://www.comp.nus.edu.sg/programmes/ug/project/urop/faq/>

Coordinator: Dr Zhao Jin

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Thank you!

Reminder: Applications close **17 November 2023**