Warning

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

This deck is for both AY 15/16 Sem I, presented on 14 Oct 2015, for prospective students choosing UROP to start in Jan 2016.
NUS SoC UROP Briefing

AY 2015/2016 Sem I

Presented by Kan Min-Yen @ SR2
Assisted by Mrs Kwek Wong Kay
(Revised 14 Oct 2015)
Objective

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

Typically, research involves these activities:
- Problem formulation;
- Literature survey;
- Attending research seminars;
- Proposal and implementation of solutions and their evaluation; and
- Documentation and presentation of results.
UROP @ SoC

Modules

- CP3208: Undergraduate Research in Computing I
- CP3209: Undergraduate Research in Computing II

Prerequisites

- Completed at least 60MC
- Minimum CAP of 3.8
- Approval of CS/IS department

Two Options

- 2 semester UROP: CP3208 & CP3209 (8MC)
- 1 semester UROP: CP3208 (4MC)
  - Can be done during summer (special term)
  - Can continue with CP4101 (Final Year Project)
Evaluation - CP 3208/9 Track

50% Continuous Assessment (Supervisor)

- 5% Written literature review or tutorial presentation (CP3208, around Week 8)
- 5% Written progress report (CP3208 end of semester)
- 10% Oral presentation of progress to supervisor/research group (CP3209, around Week 8)
- 30% Understanding, formulation and execution, as demonstrated throughout the project and in the progress/final reports (CP3209, end of semester)

50% Final report and oral presentation

- Two independent examiners

You get the same grade for both modules at the end of the entire project; after the end of CP 3208, you will receive an IP grade (“in progress”) that will be changed to your actual grade after the final report in CP 3209.
Evaluation - CP 3208 Track

50% Continuous Assessment (Supervisor)
- 10% Written literature review or tutorial presentation (Around Week 8, or halfway through special term)
- 40% Final Report and Overall Performance (40%) (End of semester)

50% Final report and oral presentation
- Two independent examiners
15 Oct 2015: UROP applications open

- Put in your application form to the Undergraduate Office (Mrs Kwek)
- You will be informed when it is approved
- Once approved, get the project assignment form signed by your supervisor and hand in to Mrs Kwek
- You may do both simultaneously

12 Nov 2015: UROP application close
Finding Projects

Approach the faculty!

- Browse UROP project list at https://mysoc.nus.edu.sg/~projadm/
- You should look through FYP projects and ask the faculty to propose something similar.
- Talk with any faculty that whose area is of interest to you.

You can also propose your own project. You will still need to find a professor to supervise you.
<table>
<thead>
<tr>
<th></th>
<th>UROP Code</th>
<th>Project Title</th>
<th>Supervisor</th>
<th>Course Code Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>U024170</td>
<td>Explaining SQL Queries in English</td>
<td>chancy</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>2</td>
<td>U004400</td>
<td>Nice-looking 2D barcodes</td>
<td>changec</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>3</td>
<td>U004410</td>
<td>Image Forensics</td>
<td>changec</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>4</td>
<td>U004420</td>
<td>Privacy in data publishing</td>
<td>changec</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>5</td>
<td>U100090</td>
<td>Undersea Navigation for Autonomous Undersea Vehicles</td>
<td>ctank</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>6</td>
<td>U100100</td>
<td>Developing Support Systems for the Bumblebee Autonomous Underwater Vehicle</td>
<td>ctank</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>7</td>
<td>U041040</td>
<td>Soundscapes for Electric Motorcycles</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>8</td>
<td>U041050</td>
<td>Optimising Digitisation</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>9</td>
<td>U041060</td>
<td>Name Recognition and Organisational Analysis</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>10</td>
<td>U041070</td>
<td>Visualisation of Organisational Structures</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>11</td>
<td>U041080</td>
<td>Long-range Wi-Fi for Pacific Islands</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>12</td>
<td>U041090</td>
<td>Communications in solar-powered ocean-going vessels</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>13</td>
<td>U041100</td>
<td>Data collection and visualisation for experimental electric vehicles</td>
<td>henz</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209, CP3208 in special semester</td>
</tr>
<tr>
<td>14</td>
<td>U079480</td>
<td>Verb Duration Discovery</td>
<td>kanmy</td>
<td>CP3208 in semester 1 or 2, CP3208 + CP3209</td>
</tr>
<tr>
<td>15</td>
<td>U079490</td>
<td>Mathematical Equation Relevance for Search Engines</td>
<td>kanmy</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>16</td>
<td>U079500</td>
<td>Recommendation for e-Books</td>
<td>kanmy</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>17</td>
<td>U079510</td>
<td>Does Google Scholar Provides Really Relevant Results?: Personalizing Google Scholar Ranking for Each Researcher</td>
<td>kanmy</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>18</td>
<td>U079520</td>
<td>More Sophisticated Approach to Serendipitous Mobile App Recommendation</td>
<td>kanmy</td>
<td>CP3208 + CP3209</td>
</tr>
<tr>
<td>19</td>
<td>U079530</td>
<td>Inferring Metadata from Scholarly Papers</td>
<td>kanmy</td>
<td>CP3208 + CP3209</td>
</tr>
</tbody>
</table>
Support

We provide the following for each UROP student:

- B&W paper quota 50 pages
- Colour paper quota 20 pages
- A1 Poster

See [https://docs.comp.nus.edu.sg/node/1732](https://docs.comp.nus.edu.sg/node/1732)

In addition, each project is given a budget of $50 for small items (claim through supervisor with receipts)
Exemptions

- For Computer Science programme, only students in the Turing Programme are allowed to replace CS3201/CS3202 Software Engineering Project or CS3281/CS3282 Thematic Systems Project with UROP CP3208/CP3209, under the restriction that the project contains significant programming content (subject to approval of UROP coordinator).
- For the Computational Biology programme, CP3208/CP3209 is allowed to replace up to two level-3 electives under the restriction that the UROP project must in the computational biology area (subject to approval of UROP coordinator).
- For the Communications and Media programme, CP3208 and CP3209 is allowed to replace CS4201/CS4202 Interactive Systems Project, CS4203/CS4204 Game Development Project, or CS3281/CS3282 Thematic Systems Project except for students in Concurrent programme with Carnegie Mellon University under the restriction that the project is in the media area (subject to approval of UROP coordinator).

To apply these exemptions to your case, please approach Mrs Kwek in the Undergraduate Office for the relevant waiver forms.
Exemptions 2

- For University Scholars Programme students that matriculated in 2012/2013 only, you may read UROP modules CP3208/CP3209 in place of the two Computer Systems Team Project modules (CS3201/CS3202 or CS3281/CS3282). CP3208/CP3209 are independent study modules (ISMs) and they will also be counted as two of the four Advanced Scholars Modules (8 MCs).
- N.B. USP students matriculating 2013/2014 or later cannot apply this rule.


To apply these exemptions to your case, please approach Mrs Kwek in the Undergraduate Office for the relevant waiver forms.
“UROP is an interesting opportunity for undergraduates to extensively explore and gain insight into a particular topic of Computer Science. Doing UROP also helps us to have a rough idea of what research in CS is like, and to improve many skills, such as problem solving, communication and writing”
“UROP gives me the opportunity to work on an exciting cutting-edge research project. I really enjoy the meaningful experience working on the project. For those who loves challenges in doing research, UROP is the way to go.”

Mr Harta Wijaya
FAQ and Issues

Q: In CORS, there is a slot for UROP lectures. What is that and what happens if it conflicts with another module?

A: For NUS modules, we sometimes have to create “dummy” modules to allow the timetabling system to mount the course. Don’t worry, there are no UROP lectures. If you find that another course conflicts with it, we can manually register you for UROP (if the UROP application was approved) bypassing CORS; please approach the UROP administrator in the undergraduate office.

Q: Is the UROP graded on the final report that we submit to the digital library at the very end of the UROP, or it is based on the report we handed in for examination? If the reviewer suggests edits then are they compulsory and accounted for in the final grade?

A: Your grade for UROP is partially based on the report that you turn in to the examiners. Unless otherwise communicated to you by your examiners or supervisor, further changes to the thesis for the archival copy in SoC’s digital library are not considered for your grade.

Q: I heard that hardcopy is no longer required for the reports. Is that true?

A: Yes. As announced on the News part of the UROP website, the workflow for reports has been recently revised such that students need to distribute their report directly to the examiners in softcopy by default. If an examiner requests hardcopy, you will be required to furnish it. The report will still need to be uploaded to IVLE for timestamping purposes.
Contact Information

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

Coordinator: A/P KAN Min-Yen
<kanmy@comp.nus.edu.sg>, 05-12, AS6

Administrator: Mrs Kwek Wong Kay
<kwekwk@comp.nus.edu.sg>, UG Office

Thank you!
Reminder: Applications close 12 Nov