FACULTY OF DENTISTRY
UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAM
(UROP)

BACKGROUND
Since its inception in 1996, the Undergraduate Research Opportunities Program (UROP) has been the primary means in which dental undergraduates are exposed to research. Academic staff, both full time and part-time, have provided research guidance to dental students, many of whom have done the Faculty proud at the Dentsply Student Clinician Program, the Asia Pacific Dental Students Association Scientific Competitions (APDSA) and the SEAADE-GC Dental Asia Student Prevention Programme Competition.

OBJECTIVE
UROP aims to cultivate research interest and provide every undergraduate in the faculty an opportunity to carry out supervised research work. Students work in groups under the guidance of a research mentor to explore research ideas and test hypotheses as a way to learn the discovery of new scientific knowledge. In addition, the research can be done in the form of literature review or desktop experiment.

GUIDELINES

SUPERVISOR
1. The supervisor is normally a member of the Faculty of Dentistry (FoD), including full-time, part-time and adjunct staff.
2. A non-FoD staff with proper expertise may be considered as supervisor

CO-SUPERVISOR
3. Full-time & part-time non-NUS staff (e.g. from another institution) and those residing outside of Singapore may be appointed as co-supervisors.
4. If the supervisor is a non-FoD staff, the co-supervisor must be from FoD.
5. In the event that the supervisor resigns/leaves the Faculty, the co-supervisor can take over the project as main supervisor. However, if there is no co-supervisor in the project, a new supervisor has to be nominated and 'Change Supervisor (UROP) Form’ needs to be submitted.

STAFF PROJECT PROPOSAL
6. Each staff is invited to submit using UROP Form 1 a maximum of one project title per academic year as a main supervisor. The same academic staff may also assist in the supervision of one other UROP project in the same academic year as a co-supervisor.
7. A project abstract of around 200 words is requested upon submission of UROP Form 1.
8. There must be an indication of the optimal number of students required with a minimum of one to a maximum of five students per project title.

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9. The project duration should be 1½ years such that project completion can be achievable during the students’ candidature.

STUDENT PROJECT SELECTION / SUBMISSION

10. A list of staff project proposal will be made available for students’ viewing and selection.

11. Each student:
   a) must first identify a project that matches his/her interest
   b) discuss with the relevant faculty member of his/her intention
   c) select the project title on the UROP Form 2

12. Class representative is to submit UROP Form 2 with the complete students; project selection to Ms Zarina, Dean’s Office.

13. If there are more project title submissions than required, the Faculty Research Committee and/or VDR will make the decision in project shortlisting taking into consideration the staff supervisory load and the overall Faculty research directions.

14. Student and supervisor will be informed by e-mail of the final approval.

UROP PROCESS

15. Students are advised to make reference to the UROP Milestone (Attachment 1).

16. A schedule of regular meetings should be arranged to facilitate students’ progress and problem solving at an early stage.

17. Students should be guided in the project budget proposal using the prescribed UROP Form 3 to be submitted to Dean’s Office. The costing of items should be under broad categories without necessity of providing quotations at this stage. The purchase of equipment is generally not encouraged. Upon approval, students can request for purchase using Purchase Requisition Form (UROP Form 4) and/or Reimbursement Form (UROP Form 5).

18. Since participation in UROP entails certain time commitments, the student is advised to manage their time properly.

19. Upon project completion, all re-usable research items (e.g. thumb drive, scanners, etc) purchased under Faculty fund are to be returned to Ms Zarina Sing.

FINAL RESEARCH REPORT/ ASSESSMENT & PRESENTATION

20. Each group is required to submit 3 copies of research final reports to the Dean’s Office at the end of Year 4 Term 1. No late submission is permitted.
21. Each student will be assessed by the supervisor/s. **Supervisor’s assessment** carries 50% of the mark which has the breakdown as shown in **UROP Form 6**.

22. A panel of judges will be invited to assess the research final reports. **This judge’s assessment** carries 50% of the mark as in the **UROP Form 7**.

**FACULTY UROP DAY**

23. Some or all project groups will then be selected/required to make a presentation at the Faculty UROP Day. It comprises of 12-min **Oral Presentation** and a 3-minute Question-and-Answer. No extra credits will be given for this presentation.

24. Faculty might nominate up to 3 project group winners (**experimental projects only**) from the Faculty UROP Day to compete for the **Outstanding Undergraduate Research (OUR) Prize**. This is open to both individual and group (**≤ 5 members**) of full-time matriculated undergraduates. The prizes are S$2,000 and S$5,000 respectively.

25. The selected teams (**experimental projects only**) will represent the Faculty at various national and regional level competitions based on the nature of the projects. The competitions may include:

   a) **IADR SEA Division Travel Award** under the Junior Researcher Category [http://www.seaade.vn/seaadeawards.htm]. Presentation at the IADR SEA Division Travel Award competition is through a poster.

   B) **Dentsply Student Clinician Program** [http://www.dentsply-asia.com/index.htm]. This is a tabletop demonstration which is conducted in September each year in Asia during the Joint Annual Meetings of the South East Asia Association for Dental Education and the International Association for Dental Research, South East Asia Division.

   C) **SEADDE-GC Dental Asia** [http://www.seaade.org/]. This program that is usually scheduled in September, is a tabletop-poster display/demonstration which provides a wonderful opportunity for dental students to show their prevention ideas and activities in combating oral diseases/conditions. It also allows student teams an opportunity to compete for awards and recognition.

   D) **Asia Pacific Dental Students Association Scientific Competitions (APDSA)** [http://www.apdsa.com]. This is an annual event to bring together dental students from member nations in the region. Dental students will have the opportunity to be exposed to many different dental faculties and their students.
REGULATORY CLEARANCES FOR STAFF AND STUDENTS

Supervisors, full time and part time, should ensure appropriate regulatory clearances and that approval are sought from the relevant regulatory bodies below:

I. Office of Safety, Health and Environment (OSHE) [http://www.nus.edu.sg/osh/manuals/sop.htm]
   If the project involves more than minimal risk, risk assessment needs to be performed.

II. Institutional Animal Care & Use Committee (IACUC) [http://nus.edu.sg/iacuc/]
   If the project deals with animals, ethical approval needs to be sought from IACUC.

   If the project involves human subjects and/or human tissues or deal with human cell cultures or human cell lines, IRB or DSRB approval is needed.

   Exemptions from IRB need to be sought for the following:
   - When dealing with human commercial lines.
   - When dealing with human subjects in non-interventional studies, such as questionnaire survey, informed consent must still be obtained.

   However, if student’s project arises from supervisor’s research project which had received prior approval of NUS IRB or DSRB, the supervisor should provide the relevant certificate number. In this case, student project would be similarly covered.

IV. Industry Liaison Office (ILO) [http://www.nus.edu.sg/ilo/]
   If the projects engage external parties other than NUS, ILO should be consulted before finalizing the research collaborations.