

Accepting Undergraduate Students for Capstone/Experiential Learning

The PC group aims to train lab group members to become excellent *Chemist-citizens*, who will be able to perform well in either academia or industry.

Every year, the PC group is committed to accept undergraduate students for:

CHEM3999 Directed Studies in Semester 1 or Semester 2

CHEM4910 Chemistry literacy and research in Semester 2

CHEM4966 Chemistry Internship in Semester 1, 2 or summer

CHEM4999 Chemistry project

The number of students who will be admitted to each course are posted on the webpage. Students who are interested should contact Prof. Chiu (pchiu@hku.hk) as soon as possible, please see the deadlines on the webpage.

Various research scholarships are available from the University as well as the Faculty of Science, and students are welcomed to apply to those to support their work, e.g. in the summer. The supervisor will not be paying any remunerations for work done that will be credit-earning.

Prof. Chiu is committed (1) to helping students who join any of these courses to further develop themselves—their knowledge and skills in organic chemistry, and (2) to writing reference letters on their behalf.

For CHEM3999, CHEM4966, and CHEM4999, students must have attended a Department safety tour and pass a safety test, before beginning work in the laboratory, if the project involves laboratory work.

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In the PC group, **CHEM3999 Directed Studies** is a one semester research experience in the laboratory. The student will be given a small research project to work under the supervision of a lab member. Students will be required to attend group meetings and also present their work in the group. The work will be quite intensive.

An “A” grade in CHEM3441 and CHEM3443 will be required. Having already completed or attending CHEM4443 will be a bonus. Interested students should contact Prof. Chiu (pchiu@hku.hk) as soon as possible, please see the deadlines on the webpage.

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In the PC group, **CHEM4910 Chemistry Literacy** will be a literature research project only, although a small lab component may be incorporated in some cases. A topic for research (typically in the area of organic chemistry, medicinal chemistry and applications) will be selected by Prof. Chiu together with the student to cater to his/her interests and goals. Then the student will be expected to design a work schedule with milestones, that will ultimately complete the 3000-word dissertation and oral presentation required by the course.

Students are expected to learn to organize a work program to manage the big writing and research project, write a document using chemistry terms and professional language, use chemical structure drawing software, do literature research using Reaxys, read current research papers from journals, and acquire skills in oral presentations.

Students who apply should have a strong interest in organic chemistry, and should contact Prof. Chiu (pchiu@hku.hk) as soon as possible, please see the deadlines on the webpage.

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In the PC group, **CHEM4966 Chemistry Internship** aims to give students an experience of working as a chemistry professional in a lab environment or in a teaching environment. The experience should typically be at least 1.5 months of full-time work in the summer.

For a **laboratory project**, the student will not be given a project of his/her own but will be assigned to work with a lab member and to achieve certain deliverables by the end of the internship. Students will learn synthesis skills, searching for literature references, organization of lab environment and work, planning, and will be assessed based on the demonstration of professional skills such as good communication, responsibility/punctuality/organization, performance of lab work, ability to collaborate, and contributions to the project. Students will be invited to present their work in group meetings.

For the students will be working in an organic chemistry lab project, students with reasonably good grades (B grade or above) in organic chemistry courses (CHEM2441, CHEM3441 and CHEM3443) are accepted. Having already completed CHEM4443 would be a plus.

For a **teaching project**, the student will work closely with Prof. Chiu on a small project related to teaching of organic chemistry. Examples may be on online teaching delivery, increasing student engagement, and using learning analytics. This project is particularly relevant to BSc. & B.Ed. students, but also open to B.Sc. students who have a passion for teaching. The student will be assessed based on the demonstration of professional skills such as good communication, responsibility/punctuality/organization, performance and excellence work, ability to collaborate, and contributions to the project. Students will be invited to present their final project results in a group meeting.

For the students will be working in an organic chemistry lab project, students with reasonably good grades (B grade or above) in organic chemistry courses (CHEM2441,

CHEM3441 and CHEM3443) are accepted. Having already completed CHEM4443 would be a plus.

For the students will be working in an organic chemistry teaching project, students with reasonably good grades (B grade or above) in organic chemistry courses (CHEM2441, CHEM3441) are accepted. Having completed additional chemistry courses would be a plus.

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In the PC group, **CHEM4999 Chemistry project** is a year-long research project in organic synthesis. Students will be given their own research project and will have a lab member as a mentor. The work will be very **intensive**, but some students have been able to be co-authors on research papers based on the results they have acquired in the project. Students will join and present their results in group meetings.

A mastery of basic organic chemistry is a requirement ("A" grades in CHEM2441, CHEM3441, CHEM3443). Students should ideally have also completed CHEM4443 with a good grade. Due to the intensiveness of this research course, and so as to not jeopardize one's performance in other courses, only students with good overall standing in the chemistry major will be accepted.

Students who are interested should contact Prof. Chiu (pchiu@hku.hk) as soon as possible, please see the deadlines on the webpage. Acceptance decisions will be given the latest by **the summer prior**.