UCI CHEMISTRY GRADUATE PROGRAM 2017-2018

General Description of the Analytical, Atmospheric, Biophysical, Physical, and Theoretical Chemistry Tracks

Your first year in graduate school will start out with heavy course work and teaching responsibilities, and transition into focusing on your Ph.D. research. You are required to complete at least seven courses, including both specialization-specific core courses and electives (Chem 200, 280, 281, 290, 399 do not count as one of the seven required courses). The courses must be taken in the first academic year of study if they are offered on an annual basis; if the courses are offered biannually, they may be taken in the second year of study. Students who are well prepared should take three four-unit courses each quarter; students who feel a little overwhelmed by the coursework and teaching responsibilities may elect to take two four-unit courses in some of the quarters. Your research and/or academic area advisor will help you select the courses going beyond the minimal requirements. Note that there may be relevant courses in other UCI graduate programs, for example physics, biology or engineering. Using a non-chemistry course as a substitute for one of the required chemistry courses requires a petition. Most reasonable petitions are granted; talk to the academic advisor (in your case Prof. Potma) about your specific academic goals.

By far the most important decision you will make in your first year is the selection of a research advisor. This decision will influence your trajectory as a scientist for your entire time at UCI, and also for the rest of your life. Therefore, plan to devote significant effort to making this decision. Physical chemistry students are required to participate in 3 lab rotations (see details below). During rotations, you will be expected to attend group seminars, group events, and use office/lab space in the host labs. This will give you a better feel for the group dynamics, and help you make a more educated choice by the advisor selection deadline (week 6 of the winter quarter). Until you permanently join a group, the faculty member from your first rotation will serve as your research advisor, and in this capacity, will help you determine the most appropriate courses to take in the fall and winter quarters, and provide feedback and support letter (if needed) for your graduate fellowship applications. Therefore, rotate with the group of your first choice during your first rotation.

The course “Conduct of Research” (Chem 200) is a required course for all chemistry students. You will be exposed to presentations from faculty, and learn about the ethical conduct in science as part of this course. More details on this course will be provided during the first lesson.

You are also required to sign up for, and attend the Physical Chemistry Seminar Series, listed in the schedule of courses as Chem 290. These seminars take place every Tuesday, at 3:30 pm, in room RH104 (note: the starting time listed in the catalog is not always correct). They are meant to introduce you to a variety of P-Chem related topics, and should be a good opportunity for you to identify a topic for an outside research proposal (see below.) What you learn may also help you chose a research project.

Finally, there is a four-quarter teaching requirement for all students. Unless you have a fellowship, you will be teaching every quarter during your first year. It is ***mandatory*** that you enroll in Chem 399 for every quarter you are employed as a TA. We are committed to the quality of education and take teaching performance very seriously at UCI. Students who excel in teaching will end up with a wider choice of career options after they graduate.

Year 1, September	***Orientation***: you will spend two weeks before the classes begin on required training and orientation activities.
Year 1, Sep-Feb	***Rotations***: you must select three research groups appropriate to your specialization, and spend five weeks interacting with the group advisor and students in each of these groups. The rotation schedule and logistics are discussed in more detail on the next page.
Year 1, February	***Join a research group***: the deadline to choose your research advisor is the end of week 6 during the winter quarter. You are welcome to join a group earlier but you will still be expected to complete 3 rotations.
Year 1, June	***Start research***: Most students start doing full-time research in the summer (you are encouraged to start earlier). With most of the coursework behind you, research is going to be your major activity until you graduate.
Year 1, September	***1st year exam***: Starting from mid-June, you will be devoting 100% of your time to your new research project. At the end of the summer, you will be required to demonstrate your research progress by submitting a personal statement and a research summary, and give a PowerPoint presentation to a faculty committee. More details on this will be provided in a separate document dealing with the logistics of the 1st year exam.
Year 2, October	Your advancement to candidacy committee is assigned by your academic area advisor.
Year 2, November	Everyone who is eligible should apply for the NSF graduate fellowship in their second year (this is an integral part of the 1st year exam).
Year 2	You should complete the four-quarter teaching requirement or make plans with your research advisor to do so in the near future. We encourage you to receive a research or course-work Master's Degree once you fulfill the requirements. Writing your Master's thesis may take a little extra time, but it will pay off later as it will serve as a starting point for your advancement exam and for your PhD thesis.
Year 3, November	***Advancement:*** You will prepare two ≈15 page documents, one describing your current and future research for the Ph.D. and one describing an original research proposal. You will make a 20 minute PowerPoint presentation on each subject and answer questions from a committee of 5 faculty members. More detailed information will be distributed by your academic area advisor after your 1st year exam (in October of year 2).
Year 3, June	***3rd-year report:*** Prepare and submit a one-page third-year research progress report to your thesis committee.
Year 4, June	***4th year report:*** Prepare and submit a one-page fourth-year research progress report to your thesis committee.
Years 4-5	***Ph.D. defense:*** Finish research, write a thesis, and defend your thesis in front of your committee.

1st year rotation schedule:

Students specify 3 labs for the rotation to their academic advisor (Potma)	First week of orientation
Academic area advisor collects preferences for rotations from each student. Students should provide preferences for 1-2 initial rotations with the remaining ones determined later in the fall quarter, after attending Chem 200 talks, classes, etc.	Second week of orientation
1st rotation. As mentioned above, the 1st rotation should be the group of your first choice, and the group PI will act as your temporary research advisor until you officially join a group.	Week 1-5, Fall quarter
2nd rotation	Week 6-10, Fall quarter
3rd rotation	Week 1-5, Winter quarter
Students declare their advisors, submit the signed advisor form to Jaime Albano, and move to their new offices.*	Week 6, Winter quarter
Students who have not joined groups have a meeting with the academic area advisor to discuss their plans and reasons for not joining a group on time.	Week 7, Winter quarter

* ChaMP students, who also participate in rotations, may delay their advisor selection to the end of the spring quarter

Rotation logistics

- Rotations are optional but highly recommended for students who officially join a specific group before the academic year starts.
- Students who come early to do summer research may use their summer research project it as their 1st rotation.
- Biophysical students may use their two summer rotations as their 1st and 2nd rotations. They are encouraged to participate in 3 new rotations in the fall and winter quarters.
- ChaMP summer rotations taken as part of Chem 206 (Laboratory Skills) may not be used as a substitute because they have a different format and purpose.
- Students should move into the office space of the group through which they are rotating (if space is available).
- At the beginning of each rotation, the group PIs should meet with the students, and explain how they expect them to participate in the group activities, for example: come to group seminars, review recent papers published by the group, learn about the research taking place from different group members. The PIs are not supposed to give you full-time research projects during rotation periods. The goal is to get to know the group members, not to conduct meaningful research (you will have no time for this).
- Students chose an advisor after the last rotation completes and relocate to their permanent offices.

Frequently Asked Questions
What courses should I sign up for and when should I do it?

First Academic Year

Immediately after orientation/advising:

- Sign up for 2 or 3 standard four-unit courses which are best aligned with your track.
- Do not sign up for more than 3 standard four-unit courses unless you are a superman or a wonderwoman.
- Sign up for 200 (required).
- Sign up for 290 (required) - chose the Tuesday section only.

Once you are assigned a course to teach:

- Sign up for 399 (this is required!). The number of units you assign to Chem 399 is not important, but it is best not exceed 16 units total for all your courses (if this happens Tenley Dunn in the graduate student office will have to fill out some paperwork for you).

Other important points:

- Do not sign up for research (280) for the groups you will be rotating with.
- Do not sign up for research seminars (291) in the groups you will be rotating with even if you attend their group meetings. Note that the times listed in the schedule of classes for 291 may not be the same as the actual group seminar time. You will have to contact the group PI if you want to know the group meeting schedule.
- Courses 206, 207, 208, 234, 236 are offered during the summer even though they officially listed in the fall quarter schedule. Sign up for these courses in the fall quarter only if you already took them during the summer (e.g., as part of ChaMP).

Dropping classes:

If you feel that you are going to fail a course, dropping it may be an option. Please refer to following website http://www.reg.uci.edu/enrollment/adc/exceptions.html. The area advisor has to determine whether or not to approve the exception after week 2 and before week 6. The request goes to the physical sciences student affairs office and then they forward the chemistry graduate student requests to the area advisor. It is important that you remain at >12 units after the drop, otherwise you will be in trouble (e.g., you will be not eligible for TA employment).

Subsequent Academic Years

Since you will not be taking as many courses, and you may not have to teach any more, your main courses will be research (280) and research seminars (291). Assign as many units as necessary to 280 in order to get the required 12 units in total.

Summer Quarters

In the summer time, you are not considered as students. Instead, you become full-time research assistants, paid from various research grants. There is no need to sign up for any courses during the summer. This is also why it is critical to be in a research group by the end of the first academic year – if you are not you will not be getting any financial support during the summer.

What does remaining in "good standing" require?

1. Completion of seven graduate-level courses that will support your area of research.
2. Earning "B" or better in all courses (a "B–" is a failing grade in the Graduate School). A single "B–" can be petitioned to count towards your degree]
3. Keeping your GPA above 3.1 to qualify for TA positions.
4. Completion of Chem 200: Conduct of Research (does not count as one of the seven required courses).
5. Joining a research group.
6. Attending every physical chemistry seminar as well as special seminars in your research area.
7. Completion of our quarters as a teaching assistant and getting an A in each of your Chem 399 teaching courses.
8. Successful completion of the first year exam
9. Advancement to candidacy examination ("orals")
10. Completion of annual research reports explaining your research progress.
11. Satisfactory completion and defense of a doctoral thesis

Where can I sign up for courses?

The UCI General Catalogue describes each and every course offered by the University this year. Google "UCI General Catalogue" and navigate to the School of Physical Sciences, Department of Chemistry to see the current courses. Here is the link: http://catalogue.uci.edu/schoolofphysicalsciences/#courseinventory

The UCI Web Schedule of Classes allows you find available classes, times, locations, enrollment, etc. Google "UCI websoc" and start searching for the classes you want. Here is the link: https://www.reg.uci.edu/perl/WebSoc

UCI's University Registrar controls enrollment. Google "UCI webreg" and follow the steps to sign up for classes.

UCI's Electronic Educational Environment allows you to see all the classes in which you are enrolled (course web sites, grades, class location, class times, etc.) and all classes you teach. Go to https://eee.uci.edu/ and sign in with your UCI ID.