UCI Department of Chemistry

First-Year Chemistry Graduate Students Course Planning Handout

2025–2026 Academic Year

Individual Advising Appointments: August 2025

ChAMP and Materials Chemistry Area Advisor: Prof. Joe Patterson
Chemical Biology Area Advisor: Prof. Jennifer Prescher
Inorganic Area Advisor: Prof. Michael T. Green
Organic Area Advisor: Prof. Suzanne Blum
Physical, Theoretical, Nuclear, Analytical & Atmospheric Area Advisor: Prof. Eric Potma

Course Requirements of the Ph.D. Program

1. Complete 7 four-unit lecture courses that support your area of research (with approval from area advisor)
2. Complete Chem 200: Conduct of Research (does not count toward 7 required courses)
3. Enroll in 12–16 units per quarter
4. Earn "B" or better in all courses (anything below "B" is not passing; *one* "B-" can be petitioned to count towards your degree)
5. Maintain a GPA above 3.1 to qualify for TA positions
6. Serve (at least) 4 quarters as a teaching assistant or (at least) 3 quarters for ChAMP students

Research Requirements of the Ph.D. Program

1. Attend faculty research talks during orientation
2. Complete 3 three-week research lab rotations during Fall 2025
3. Join a research lab by the end Winter 2026 quarter
4. Complete an annual IDP and discuss it with your research advisor
5. Satisfactorily complete second-year examination
6. Satisfactorily complete advancement to candidacy examination ("orals")
7. Satisfactorily complete and defend a doctoral thesis

Other responsibilities for Chemistry graduate students:

1. Attend weekly research seminars. It is recommended to attend seminars in complementary fields.
    a. Organic Seminar (Wednesdays at 4 PM)
    b. Physical Seminar (Tuesdays at 3:30 PM)
    c. Inorganic Seminar (Thursdays at 3:30 PM)
2. Attend Departmental Colloquia, special lectureships (i.e., Taft Lecture, Lee Lecture, etc.), special symposia, and special seminars as appropriate.

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Course Selection Tools

- A list of Chemistry graduate courses offered in 2025–2026 is available on the Pre-Advising Course Schedule and at Chemistry Graduate webpage (linked)
- For a complete list of all courses offered by Chemistry, visit the current UCI General Catalogue (linked)
- The UCI Web Schedule of Classes (WebSOC) allows you to current course schedules
- Course registration must go through the campus Registrar via WebReg (linked)

Full-time Course Registration

Fall 2025*

- 3 main (4-unit) lecture courses (12 units)
- Chem 200: Conduct of Research (2 units)
- Chem 290: Seminar (1 unit — mandatory)
    - Organic/Chem Bio: 41790 with Griffin
    - Physical: 41791 with Sheldon
    - Inorganic: 41792 with Arguilla

Winter 2026*

- 3 main (4-unit) lecture courses (12 units)
- Chem 280: Graduate Research (1–6 units; *for your research group*)
- Chem 290: Seminar (1 unit—mandatory)
- Chem 291: Research Seminar (4 units; *for your research group—this is group meeting*)

Spring 2026

- 1 main (4-unit) lecture course (4 units)
- Chem 200: Conduct of Research (2 units)
- Chem 280: Graduate Research (1–6 units; *for your research group*)
- Chem 290: Seminar (1 unit—mandatory)
- Chem 291: Research Seminar (4 units; *for your research group—this is group meeting*)

Fall 2026 and beyond

- Chem 280: Graduate Research (11 units; *for your research group*)
- Chem 290: Seminar (1 unit)
- Chem 291: Research Seminar (4 units; *for your research group*)

Notes about selecting courses

- There can be some variation in the numbers of 4-unit lecture courses you take each quarter, but the ideal scenario (3 in Fall, 3 in Winter, 1 in Spring) allows you to maximize your research output in the Spring and helps you ramp up productivity going into Summer.
- Any differences from the 3/3/1 will affect your total units; your area advisor can help you navigate what to do, including using the sliding scale for research units in Winter and Spring.

- In addition to the graduate-level Chemistry courses, students working in interdisciplinary areas may choose to take approved graduate courses in other departments such as Molecular Biology and Biochemistry, Pharmaceutical Sciences, Physics, Earth Systems Science, Chemical and Biomolecular Engineering, Materials Science and Engineering, etc.
- In special cases, an upper-division undergraduate chemistry course may be used as one of the seven required lecture courses.
- Please complete the Pre-Advising Course Schedule prior to the virtual advising appointment for approval by your area advisor.
- You might have trouble choosing between two different course options. In that case, you may enroll in both, attend them in first 2 weeks, and make a final decision/drop by the deadline (end of week 2). If you like both and can handle the extra course, then you can remain in both.

* If you want to enroll in more than 16 units in a quarter, contact Bailey Spelman <bspelman@uci.edu> in Chemistry Student Affairs to ask for an exception. These requests are easily approved, and having more than 16 units is quite common, especially in the Fall or Winter quarters of your first year.

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First-Year Graduate Student Rotations in Chemistry

As beginning graduate students, you are expected to get to know many of the different research groups, advisors, and projects in the Department. Rotations in different laboratories are an important part of the process. You are required to complete 3 three-week rotations in different research groups during the Fall 2025 quarter. This year's rotations will take place according to the following schedule:

- Rotation 1: 29 September – 17 October
- Rotation 2: 20 October – 7 November
- Rotation 3: 10 November – 1 December

During Orientation, Chemistry faculty will be giving short (10–15 min) presentations on their research. Your attendance at these presentations is expected.

Near the end of orientation, you will receive an email asking you to fill out a web-based form naming your top five choices for lab rotations. We will make every effort to assign your three rotations from these five choices.

Research groups will establish their own rotation procedures, which will generally include:

- Meeting with the PI to discuss research opportunities in the group. It is a good idea to do your homework before this meeting. Read some papers. Talk to students in the group about their projects. Think of some questions you might ask the PI.
- You will likely be assigned a desk in the laboratory. Make use of it: if you can, do your coursework there so you are exposed to the lab culture. Hang out and talk to current students about their projects and what the group is like.
- Attend the weekly research group meetings, as well as any subgroup meetings as appropriate.
- Be sure to ask the PI what their expectations are for a rotation student as there will be variations from one faculty member to the next.

Rotations are meant to facilitate your introduction to a few groups in the Chemistry Department and to get you started on a path to choosing a research group. *You are strongly encouraged—and expected—to go beyond your three rotations to learn about the research groups and opportunities in the Department.*

At the end of the rotations, you will be asked to provide a list of your top choices of research advisors/groups. The group joining process will be explained in more detail later. *Importantly, you are able to choose a group in which you did not rotate; however, for that to have a good chance of working out, you will need to ensure that you've spent time with that group and interacted with the PI.*

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Typical Doctoral Study Timeline

Year 1

Fall 2025

Coursework (ideally 3 four-unit courses), teaching (12–18 hours/week), and rotations. The first quarter of graduate school brings new opportunities and new challenges, but it is also the quarter that most resembles your career as an undergraduate. At the end of the quarter, student/research advisor matching will occur.

Winter 2026

Coursework (ideally 3 four-unit courses), teaching (12–18 hours/week), rotations and a NEW LAB! The start of winter quarter will be more of the same but you should be a member of a research group. Become part of the group. Get your feet wet in the lab. Learn where equipment is located and how it is operated. Get trained on instruments. Read everything you can find about the science going on in your new lab. Take on group jobs. Perform experiments.

Spring 2026

Coursework (1 or more four-unit courses to make a total of 7), teaching (12–18 hours/week) and research. Start ramping up work productivity. Define your project and background sufficiently well so that you can accomplish lots in the summer when you are done with your classes.

Summer 2026

Research, research, research! It's time to get things done so you'll be ready for...

Years 2–3, Pre-Candidacy

Fall 2026–Winter 2027

Research, and lots of it! First-year exams/reports will happen between late Summer 2026 and early Winter 2027. The form of the exam varies slightly depending on your field of study; however, the expectations are the same for everyone: show that you are on a path to become an effective scientist and researcher. It is likely that you will teach at least one more quarter in this period.

Spring 2027–Fall 2028

More research and Advancement to Candidacy Exams. Prove to a faculty committee that you have what it takes to pursue a PhD in chemistry. The Candidacy Exam (i.e., "Orals") is a comprehensive exam in chemistry. More details to follow.

Years 3 and Beyond, Post-Candidacy

Research! At this point you should be a well-oiled machine in the lab. Churn out the papers! Take your project in new directions! Participate in and take the lead on extra-curricular projects in the Department and beyond. Figure out what you want to do with your life! Go to conferences, interview for jobs! Write and defend your thesis, graduate, and then conquer the world (but in a good way)!