

How do I Find a Research Opportunity

Where do I start?

To find out which faculty members are working in areas that you find intriguing, please refer to Appendix A, the Chemistry Department website, or the Chemistry Undergraduates Research page on Canvas. Please contact a CHEM 391/491 instructor to be added to the Chemistry Undergraduate Research Opportunities Canvas page.

There are many options for undergraduate research, but do not be overwhelmed by them! The key thing is to identify a lab with research that is interesting to you. To begin, please enroll in our Chemistry Undergraduate Research Opportunities Canvas page. You may contact a CHEM 391/491 course instructor to be added. This Canvas page includes various tabs that provide further information on Chemistry, Rice, and TMC research homes that may be of interest to you. Additionally, the CHEM 391/491 Course Instructors are happy to meet with you to make lab suggestions based on your interests. You can also use your connections with other students, TAs, or recent course instructors to help you widen your search. Positions are generally not advertised, so the best approach is simply to contact directly any faculty member whose research interests you. Once you've identified several faculty members of interest, you can contact them individually using the recommendations below.

How do I contact professors with whom I might want to work?

Read about each lab's research and consider speaking with current group members to get a feel for the personality and expectations of the faculty member. Remember that while you are trying to showcase that you will be a good fit for a specific research group, you should also find the right research group for you.

Be sure to write a personal email to the faculty member. Do not send a mass email to multiple faculty members or your email is likely to be considered spam and ignored. Your introductory email conveys an important first impression and can influence how easy it will be for you to find a lab home. In your email, tell the professor who you are (name, year at Rice), why you are looking for a position in a research lab, and why you are interested in their lab in particular. Describe any relevant coursework or prior research experience, even if it was in high school. You also may want to include whether you are looking for a short (1 semester) or longer experience, and how many hours per week you can commit to lab work. If you are considering graduate school after Rice, include this interest in the letter. As research professors receive a high volume of emails, remember to keep your message concise.

Note: All heads of research labs have either a Ph.D. or an M.D. degree and should be addressed with their professional salutations, such as "Prof." or "Dr." and not "Ms., Mrs., or Mr."

How many labs should I contact?

Getting into a lab is a fluid process, but the Undergraduate Research course instructors are excited to help you find a research home that fits your interests. Do not be discouraged if your first efforts are not successful! You should expect to contact multiple faculty members (at least 5-10) to find a position. If you know someone in a lab where you may wish to work, ask that person to put in a good word for you. If you are not successful after several attempts, you may wish to ask the CHEM 391/491 course instructor for feedback on your initial email, help making an introduction, or further support.

Are there prerequisite courses I must take before joining a research lab?

There are no specific courses required before you join a research lab; however, some principal investigators (PIs) may have their own preferences. Many students joining a lab have some background in general chemistry, inorganic chemistry (can be through general chemistry coursework), and/or organic chemistry. Your experience in some non-chemistry courses (such as physics, biology, or computer science) may help prepare you for research at the interfaces of those fields with chemistry. Importantly, research is very much "on the job" training, so do not feel that you need specific courses to be a suitable candidate.

Can I conduct research at the Texas Medical Center?

Many students, particularly those who intend to pursue medical school, are interested in research at the TMC. Chemistry majors may join a lab at the TMC. While students can find this a rewarding experience in medical research, there are several factors to consider when making a decision about off-campus research:

- 1) Lengthy security paperwork and safety training courses are required,
- 2) Travel time to and from campus may limit time for experimentation,
- 3) Some off-campus labs may not be teaching-focused or used to working with undergraduates, so additional levels of communication may be required to ensure a smooth transition.

A hybrid approach that has been successful in the past is to join a Rice lab that works closely with TMC faculty. Please see the CHEM 391/491 Course Instructor if you would like leads in these directions.

Are there paid research opportunities?

Most undergraduate research during the school year is done for credit. In many labs, paid positions during the school year are limited to lab maintenance or very routine work, and actual research will only be available for students working for credit during the academic year. However, many labs offer some paid positions over the summer. Some professors do try to set up paid research positions during the school year for students who are eligible for work-study.

Also, there are a number of competitive summer research fellowship opportunities within the Chemistry department, such as the Dr. Paul S. Engel Fellowship, the George Holmes Richter Memorial Fellowship and the Zevi & Bertha Salsburg Memorial Fellowship in Chemistry. See the Awards & Fellowships section for more information.

HOW DO I REGISTER FOR UNDERGRADUATE RESEARCH?

First, start planning far in advance. Before enrolling in CHEM 391/491/492/493, you must be accepted into a laboratory (see the "How Do I Find a Research Opportunity?" section above for more information.) The deadline for course enrollment is several weeks before the start of the semester or at the end of the prior semester. Some labs may have extensive training that must be completed before beginning work. Labs at the Texas Medical Center often have access control regulations that require filling out paperwork months in advance of starting in the lab.

Once you have secured a research position, you must fill-out the online application found on the Chemistry Department website. The online application must be submitted by August 1st for the Fall term, December 1st for the Spring term, or April 1st for the Summer term to ensure enrollment in CHEM 391/491/492/493. **Once you have submitted the online application, the Course Instructor will verify your position and proposed research project with the Research Advisor before submitting a registration override via ESTHER.** No paper special registration form is required, and only the Course Instructor (not Research Advisors) is authorized to enroll students. If you have any questions about enrollment, please contact the Course Instructor.

Please note that requesting the course during Course Registration will not result in you being added to the course, as Course Instructors are unable to see who has requested a course. You must complete the application, which must be reviewed and approved by several parties before the Course Instructor will enter your override in ESTHER. Once the override is submitted in ESTHER, you must officially register and modify your credit hours.