



## How To Go About Getting A Research Position

This document will outline what are some good steps to follow when seeking out a research position. The information here is based on what has worked for us, and so you can use this as a general guide. Several resources are hyperlinked in the text, so for more information on mentioned courses, websites, or application processes, please check there.

### **How Does Doing Research Work**

As an undergraduate, there are many opportunities for research. This work can be remote, such as data processing or computational, or more hands-on depending on the group's work.

You can do **research for credits** such as by doing a [CHEM 396](#) which is a research course done in a semester (fall/winter/summer). You can do as many Chem 396s as you'd like but it has to be with a different supervisor each time. If you are an upper year honours chemistry student, [CHEM 470](#) is a required research course where you must join a research group. These course style options give you a lot of flexibility and creativity on your projects!

Two other options include: [CHEM 400](#) which is an independent study under a supervisor. This course is great if you're short of just 1 credit! [CHEM 480](#) is like a continuation of a 396 or 470 project.

These courses usually require you to do literature research, lab work, regular meetings with your supervisor, and a final lab report and presentation.

Quite a few people will apply for **awards to do research**, such as the [NSERC/USRA](#) or [SURA](#). The NSERC award is for Canadian citizens, permanent Canadian residents, or recognized protected persons. The SURA award is open to international students, as well as Canadian students. These awards are specifically for summer research, and the applications for them open up at the end of January and close in mid February. This would be for full time paid summer research.

If you do not want to take a course or apply for funding, some professors will accept people to do work voluntarily in the lab; please talk to Dr. Sewall about this as there is a separate form and process for this option. Additionally, sometimes professors

will offer to pay you out of pocket for a summer research position. These two options are much less common so try to apply for research under the context of a course or for funding but if those don't work, these options are a good backup.

## Finding a A Research Group

Before you even decide “how” you want to do research, you need to find a group that works in line with your interests. If you are looking for a professor in chemistry, you can look on the [McGill chemistry website under research](#) where you can find the names of chemistry professors under the subcategories of various research disciplines. When you click on a professor's name, a brief description of their group's work is usually present, along with some of their publications. Try to find **at least two or three** groups that interest you. If you want to do research outside of the chemistry department, you can find the associated research pages for other departments.

The McGill Chemistry Undergraduate Students' Society also hosts an event called “What's Hot in Chemistry” annually in mid January. We invite professors who are **looking for undergraduate students** to present their research, and we give students time to talk with the professors and ask questions. This is a great way to find a potential research professor for an upcoming semester or even just to get a better idea of what research is done in the department.

## How and When to Email Professors

Although it may seem stressful to email a professor about joining their lab, it isn't that scary! If anything, they will be flattered that you are interested in their group, and the worst case scenario is they are not taking on more undergraduate students at the time. In your email, it is good practice to introduce yourself (name, major, year), briefly explain why you want to do research, mention what interests you about their work, and state in what way(s) you were thinking of doing research - applying for an award, a class, etc.

If you are really interested in a professor's research and want to show this, briefly skim their group's papers and say what about it interests you. It is also recommended that, like for any job or opportunity, you mention qualities or experience about yourself that would make you fit to do research. This could also include mentioning any previous research you have done in the email itself. Don't be afraid to say this is your first time, as everyone has to start somewhere. If you wish to apply for an award for paid summer research, you should attach your **CV and McGill Transcript** (unofficial or official) to the email, as the NSERC/SURA is quite based on academic achievement.

For **course-based** semester research, a good **2 months in advance** is a good time to reach out to professors. This is because it will give them time to figure out a project for you, or secure you a spot as others may be applying as well. For summer research with **NSERC/SURA**, it is good practice to email anytime between **mid December and mid January**. Sometimes if you email them too early, they might not be sure what their plan for the summer is, but also the competition opens at the end of January, so most people will be applying around this time. Your professor will help you a lot with these applications, as you have to do them together, so do not worry. You can always email our departmental academic advisor for concerns with the application process, or Dr. Sewall. Once a communication chain has been established, you will iron out the details of your start dates and conditions.

In terms of **how many professors to email** at once, make sure you have three labs in mind, but start with **one or two emails**. Sometimes professors take a while to respond because they are constantly swamped with emails, or their lab is full. Don't be discouraged, as that is why having more than one lab option is smart. You also do not want to email too many at once because you will have to reject many professors which is not ideal if you want to apply to their lab in the future. If you haven't gotten a response and it's been a few weeks, send a follow up email, and consider reaching out to your other lab options.

### **Words of Encouragement and Some Personal Advice**

This whole process can seem scary and intimidating at first, but it really can't hurt to try. Even if you are not able to find a position for a certain semester, you can always email again at a later time. This shows perseverance and that you really want to be a part of the lab. You can also look for experiences in other departments, or at other universities!

In terms of the research itself, every lab is different but in general, your professor and labmates understand that you're an undergrad. No one expects you to completely understand everything about the projects, nor do they expect you to know how to use every machine, the equipment, or program needed for your work. Most groups will provide you with papers to read at the start of your time in the lab, or you could take it upon yourself to find papers closer to the start of your time in the lab. Like any job, you will learn techniques and skills specific to the group's work as you go, and will get trained on machines. Don't worry about seeming to be underqualified. You are there to learn and get a feel for what research in science is like.

Chemistry is a small enough program that professors and students get fairly close. Even if your time in one group's lab made you realize that isn't what you're interested in, you still learn so much and gain a lot of experience. It then makes it easier to apply to another lab. The lab skills you learn through research opportunities can carry into industry, if you decide academia isn't right for you. Overall, it is nice to build connections with a professor, as they can be of great help for recommendations to future labs, grad schools, or industry references.

If you have any other concerns that would best be answered by fellow chemistry students, please do not hesitate to email us at [mcgill.chemistry@gmail.com](mailto:mcgill.chemistry@gmail.com).

Best of luck,

The Chemistry Undergraduate Students' Society