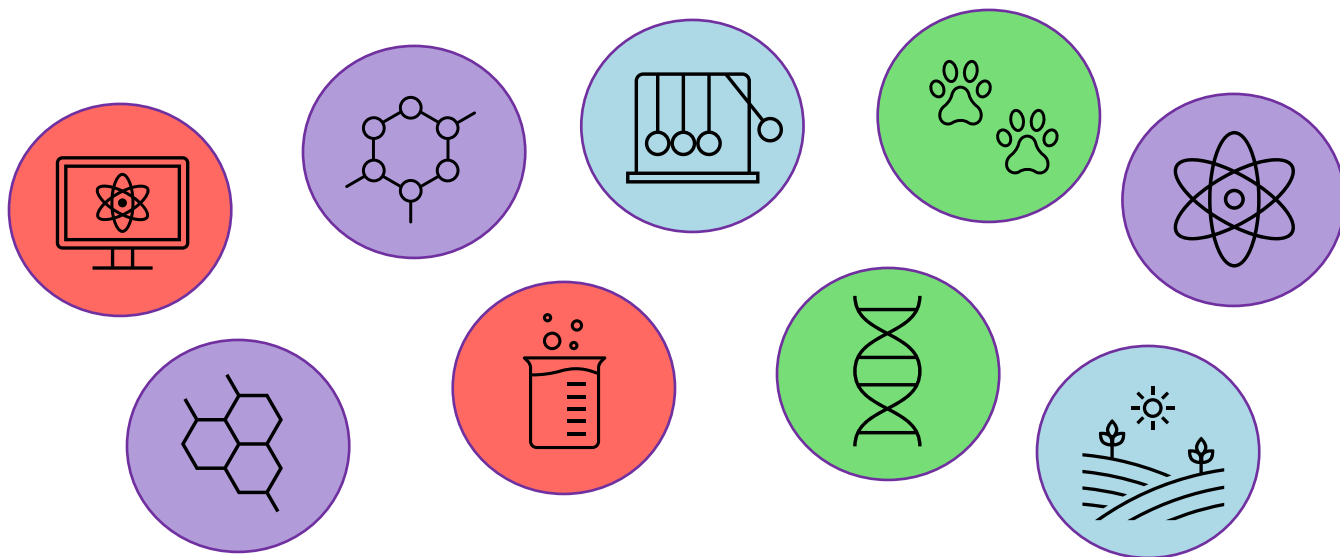


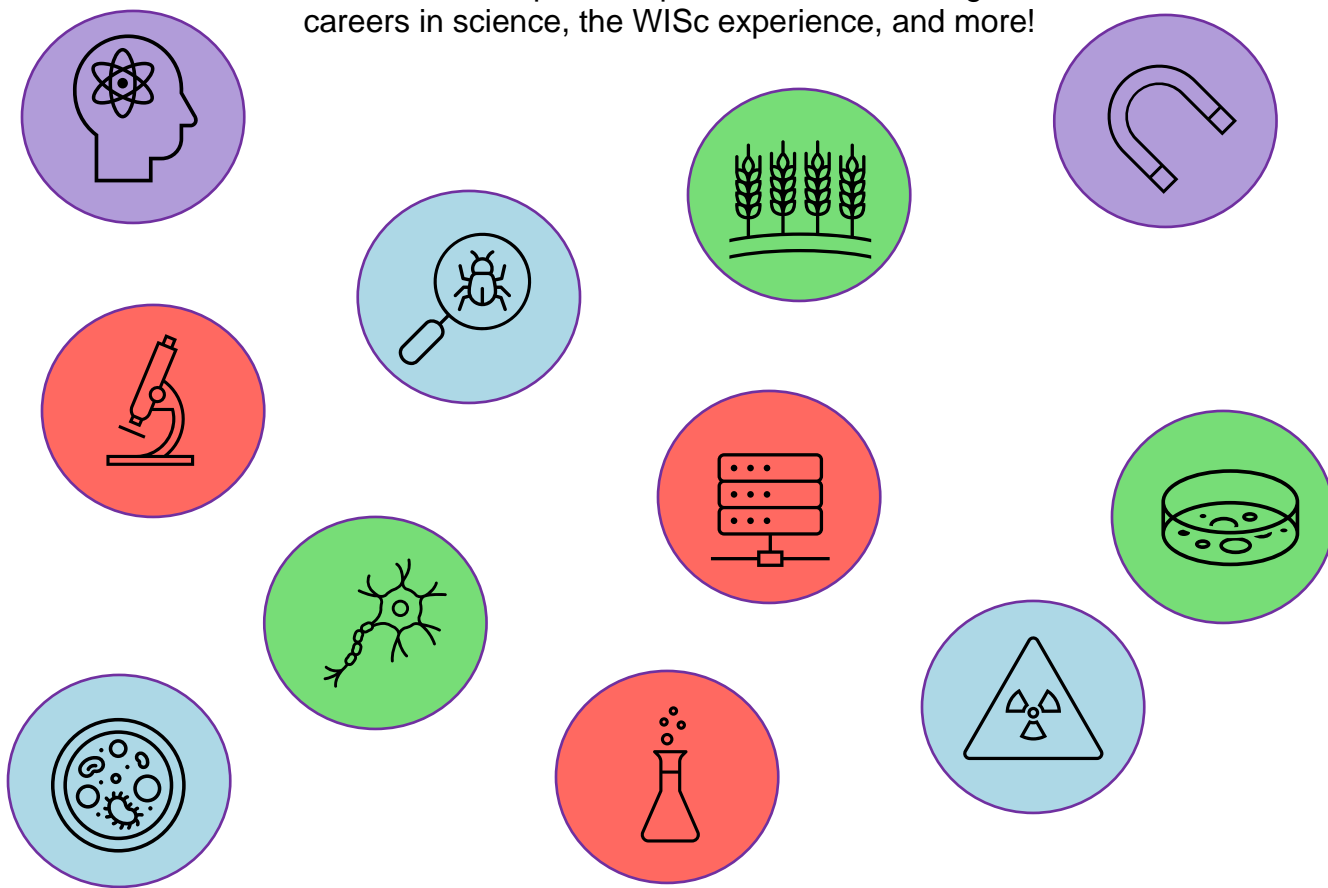


Western
Science



WISc Ask Me Anything

WISc alumni respond to questions about undergrad, careers in science, the WISc experience, and more!



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What did you go on to do after WISc? How did WISc help prepare you?



I'm doing my masters in gravitational astrophysics (GRAPPA program) at the University of Amsterdam. WISc as a program gave me access to really cool opportunities that I wouldn't have had in my normal physics degree. For instance, I got to go to a physics conference in first year that I wouldn't even have heard about as a first-year physics student. The heightened accessibility to the profs, interesting courses that don't just teach you science but how to think about science - all of that helped me build my confidence in reaching out to professionals about opportunities that I didn't always feel qualified for. It also gave me an interesting background when applying for higher studies - as integrated science is not that common of an undergraduate degree.



I'm currently in medical school at Western and WISc has helped me prepare for that in numerous ways! I think the critical thinking aspect that's introduced right away in first year is very critical to forming study habits. The way I approach new information was improved over time and I find tough concepts easier to deal with now. Furthermore, the amount of work and assignments seem like a lot in first year but it's great to form productivity habits as medical school has been a lot of work but compared to my first year at WISc, it's very similar so I'm not completely overwhelmed.



Still in school lol, to finish my second/double degree in nutrition and dietetics. It's a very research and scientifically focused degree with a variety of courses, I think at an undergraduate level it helps to have that variety, before we become specialists. It primed me to be open-minded about other fields. The philosophy of science courses, and lectures on research was a good entry point to be critical about the scientific process and have an interdisciplinary "whole-systems" perspective to any problem we tackle in the future. I'd say WISc played a potential role in preparing and enjoying my second (more specialized) degree.



I got a job working as a Climate Change Research Assistant with the Ministry of Natural Resources and Forestry. It was a completely new research topic for me, but I think WISc prepared me well for it by introducing me to many different subjects that I was unfamiliar with, ultimately teaching me how to efficiently self-study and broaden my knowledge.



I took a break to work for a bit and am now applying for masters programs. I'm assistant manager at my old barn right now, I like it, but it's really just something to do that's fairly safe and an opportunity to make a bit of money while I'm not doing school.



I went on to attend law school at UBC's Peter A. Allard School of Law. In many ways WISc is able to gift you the ability to analyze problems holistically and from different perspectives, a skill that many lawyers need when analyzing legal issues that clients bring to them. I would say WISc helped me keep an open mind.



Grad school for chemistry at UWO. Gave me supportive peers to help in the decision making and application process.



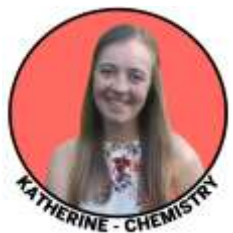
After I graduated from WISc (in the chemistry stream) I decided to pursue a one-year master's in environmental science. Since I'm making a bit of a discipline shift, WISc helped to give me the background I needed to feel confident pursuing a variety of science disciplines and has helped me to continue to see the interdisciplinary nature of my work! I'm hoping to pursue a career in environment and education after I'm finished my graduate work.



Currently applying for medical school. WISc allowed me to form close connections with professors, who have been able to write reference letters for my medical school application.



I was accepted into a Master of Forensic Science at the University of Strathclyde in Glasgow. I am currently taking a year off due to COVID and working as concierge in a retirement community. WISc definitely helped prepare me because it helped me maintain a broad, multidisciplinary approach to my chemistry degree. It greatly helped me stand out as an applicant given that I was applying to a non-chemistry master's. Felix was actually the one to recommend I look into this program in the first place, so without WISc, I wouldn't have even known this program existed. Finally, it was great to have someone like Felix be a guide throughout the entire application process, he answered a lot of questions I had and was incredibly helpful.



I'm doing a Master of Science in Plant Agriculture at the University of Guelph! I'll be studying plant metabolism of two micronutrients for floricultural operations in greenhouses. WISc truly opened up the opportunity for me to pursue this path, as with the specialization in chemistry provided the foundations of chemical processes, the minor in biology added the application to plants and an overview of plant physiology and metabolism, and the integrated science courses were an added bonus to tie it all together and practice thinking of things with an interdisciplinary mindset.



Grad school. Research based learning, critical thinking, scientific writing and reading



I am now working in the chemical industry. WISc has helped me by preparing me to handle multitasking and working on multiple projects at once. It has shaped me to be more academically organized to get the work done efficiently.



I'm starting a 16-month Master of International Business at Ivey in January. Since its business and not science my take always from WISc are a little different. WISc made me learn a lot of stuff on my own. Before going into business school, I had to either write the GMAT (a standardized test) or take a MBA math course. I took the MBA math course and did my own studying which prepared me very well. WISc helped a lot with group projects and working with other people. Going into business I will need to collaborate a lot with others so having those collaboration and presenting skills that WISc fostered are a good thing to have.



My direction has been around marine biology for some time, but I planned to be travelling for the year after graduation before I looked too seriously into an international master's program or get some real-world experience first. Unfortunately, with COVID, my options became really limited. I recently decided to get a fresh start and moved to Vancouver with a random job at a ski resort while I research and do marine bio internships along the west coast in my spare time. Who knows after that, everything is so up in the air right now! WISc helped me gain appreciation and understanding of different scientific fields and disciplines, which I now plan to apply in the interdisciplinary field of environmental science and climate change. While WISc really promotes its ability to market yourself well to employers and the job scene, I believe WISc helped me more personally as a scientist and understanding my place and passion in the science world, even when I thought I already knew! I truly believe no other program could've given me this clarity.



After WISc, I went on to the University of Cambridge to study my MPhil in physics (essentially what we would call a M.Sc. in Canada). I study experimental condensed matter physics. I search for phase transitions in the electronic structure of materials. The most famous of these types of phase transitions is superconductivity, in which electrons pair up, and the material conducts electricity without any resistance! WISc helped to prepare me in many ways, but I think the two most important are understanding the intersectionality of modern science and being able to communicate well. The language of science is full of technical jargon. What a chemist calls an orbital, the physicist calls a wavefunction. Each discipline has its own words for the same concept, and WISc helps break down those barriers so we can all speak a common language. Furthermore, WISc makes you write. It is no surprise that in my physics courses, we did not often write – but that's not necessarily a good thing! Communication is an important skill, and WISc prepared me for the communication required at the Cavendish Laboratory at Cambridge.



I am currently pursuing a Master's in Engineering Science, focusing on Biomedical Engineering and studying hip replacements. WISc gave me the skills to be able to seamlessly navigate fields that were outside my own. The jump from physics to biomedical engineering was daunting and quite large, but with the skills I gained in the WISc courses, I was able to learn the new field quickly and with little stress. I felt like I had the vocabulary to talk to both engineers and clinicians, which is vital to my research now. WISc's model taught me how to take a problem I had never considered and how to search for information to understand it rapidly, and to apply my knowledge from my discipline to it. It also included a lot of diverse teamwork, something many science programs are missing, and I feel like that has taught me how to effectively work with others, even under pressure.

Any advice for first years?



It's totally fine if you don't have any idea what you want to do. Or aren't sure of your goals anymore. Or if you're thinking of switching your major entirely. I know a lot of friends who switched out of WISc, and are doing fine. And a lot of friends who graduated with WISc that are doing fine as well. I think WISc is a great degree to help you figure out what you want even if it's by showing you what you don't want! So as lost as you may feel, trust that by simply going through the courses you're naturally building up an intuition for what you want to do and how to get there. So even if you're not liking some of the courses, keep your eye out for what you do enjoy. Go talk to professors and grad students (as WISc gives multiple opportunities to do) about what their research entails and see if any of it interests you. You have so much time to learn about yourself here, so don't panic about getting it "wrong". No matter what happens, what you're learning is still valuable - even if you end up in a different field.



It's totally fine to feel overwhelmed with all the content and assignments! But definitely take this opportunity to explore what works best for you, what you're most interested in, what types of people you like working with - without worrying about getting perfect marks! Most things you apply to don't consider first year marks and also know that it's a huge transition, so don't hold back from figuring things out for yourself as those will go a long way



Definitely use office hours whenever you can to better understand material and ask questions you've prepared ahead of time. I also recommend joining an intramural sport to meet people and have an outlet from school work!



I would say to make sure to try and do as well as possible in any elective courses to help your chances of finding something to do after your undergrad. Develop a passion for something and let it guide you to what you want to do, even if your passion changes in the process. For the first 2 years of school I thought I was going to med school until organic chemistry grades hit, after I got a lab position my third year I thought I might become a Cannabis researcher, and for my last year I knew I was applying to Law Schools to become a lawyer. I was mindful in my actions, and my advice would be to make sure you reflect on what you want out of first year, your third year (useful for applying to the next thing you're doing), and after your undergraduate degree. Be mindful in developing and cultivating who you are over the next four or how-many-ever years.



Not really.



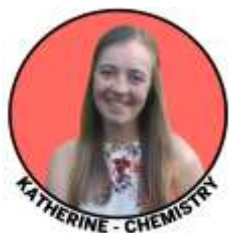
My advice for first years is to come into uni with an open mind. Study broadly and explore a variety of interests both inside and outside the classroom, you never know what you will love until you try it. Understand that you probably won't succeed at everything, and there will be many days where you feel discouraged, but that is completely normal, and I promise you will get through those difficult times. Finally, my biggest advice is to build yourself a community. Find people that support you and challenge you to be better, they will help you through the difficult times and will probably be the most important part of your journey through uni. Those people might be your rez floormates, friends you made after joining a club, or your fellow WISc-ers. It might take a while to find your people, but you will! One more thing, try not to take things too seriously or get stressed out about marks that aren't as high as you want them to be. You're there to learn and improve, so try to enjoy the process, you'll be graduating before you know it.



Take advantage of becoming close with professors and form study groups with peers.



My biggest piece of advice I can give to first years is to enjoy every moment you can and to take a deep breath and relax. There will be moments of intense stress and anxiety and you will sometimes feel as though that perhaps you may not be cut out for the program. But I promise you if you just keep persevering you are capable of so much more than you know. The four years will be done much faster than you think and you want to create an experience that is as enriched as possible. I sophed all three years and it was the best decision of undergrad. Get involved in any way you can and just take every opportunity that comes with an open mind.



Trust the process. Yes, your plans may change, but it'll all work out the way it was meant to, and you'll finish with a truly amazing degree.



Study with the students in your discipline! They're working hard and have a lot of academic similarities as you.



Throw out any strict plans and expectations for yourself and just be patient. Hear me out: My biggest overlying fear and stress from undergrad was believing I wasn't "where I was supposed to be" - whether that was physically, academically, mentally, or socially. I had this big plan for myself and what my life would look like. When things would get thrown out of my control, like when I failed my first calc midterm, lost old friends, struggled with mental health, or just disliked one of my classes, I would convince myself I'm doing something wrong and my life was off track. I would continuously stress over the fact I had no idea what I was doing or if I was smart enough for university; I felt like an imposter. Over the years, when I became too exhausted to continue trying to control every little detail, things started to fall into place - but in a completely different way than I expected. I switched specializations, found friends in unexpected places, and explored passion in sports and volunteer positions. Looking back now, if I just let go of all my rigid expectations for myself, I would still be in the same place as I am now, but I would've saved myself so much stress and anxiety. Overall, stop spending your undergrad in the way you think you "have to", and just start doing things and being around people that make you feel good- THAT is when you'll get the most out of your undergrad experience.



Enjoy yourself! In your first year of WISc, you will have busy weeks and not-as-busy weeks. Revel in those not-as-busy weeks! Western is a fantastic place, so enjoy it.



Breathe, and take some time to enjoy everything while it is happening. Yes- you might have a lot of work to do, but spending time with friends and family is still important. So is your fitness. This will keep you healthy and able to endure the rigor of the program. I can guarantee sitting in your room all the time studying will not be beneficial in the long run.

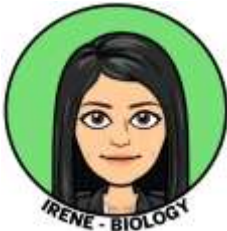
What is your opinion on how the undergrad experience went?



I really enjoyed undergrad. I had a rich extracurricular experience and got a taste of physics outreach and advocacy too which was important to me. WISc made me take courses I'd never personally take as a physics student, which forced me to think differently and I'm happy it did in hindsight (maybe not at the time). The community aspect of WISc was really sweet too. I saw my WISc peers less frequently after second year because they chose different specializations but the WISc bond was always there when we met up. I liked the closer relationship we had with our profs as well, it really helped me build up my confidence to talk to other profs.



I think my undergrad experience was crucial in forming the study habits that help me today, connections/friends that I can reach out to for various things, and a network of faculty for advice as well. More than anything, discovering what I like and don't like was very easy to do as there are so many opportunities to try out in undergrad, and that was one of the best parts of the whole experience!



It is quite a wild four years. It is tiring, overwhelming, and it's not the end but I appreciate the diverse learning experiences!



Undergrad was very difficult and took a lot of hard work and struggle! Once you find out what you're interested in there are so many opportunities available and other people to meet that love what you love. I learned and experienced things I never would have without my undergrad and am grateful for my time at Western!



I think WISc is great at times and has a ton of potential. There were times when it was clear this was a newer programs and that it had some growing pains. Try to focus on the benefits of it and having this specialized care and attention on you compared to non WISc peers and use it to your advantage. That's where the real benefit of WISc lies. Make sure to let loose and try to have some fun from time to time (while following proper health guidelines).



Looking back at my undergrad experience, I would say it was an extremely stressful time, but one where I experienced a lot of growth. The Integrated Science program is challenging, and there were some days where I felt like I was really struggling. The benefits of WISc though, is the fact that you have close relationships with your professors who really care, so it is so easy to ask for help. And even more than this, I had such a great group of WISc classmates who helped me with both the academic parts of the degree as well as everything else that was going on in my life. The connections I made during my degree were probably the most valuable parts of my whole experience. When I look back, I'm extremely happy with my undergrad experience, despite its challenges.



I thoroughly enjoyed my undergrad experience and formed really close friendships with many of my peers in the integrated science program.



I would say that though very rocky at times, my undergrad experience was the most incredible experience of my life thus far and I wouldn't change anything. Choosing WISc was definitely the right decision for me, it brought me life long friends who often saved me in desperate times. WISc had some of my favourite profs that genuinely cared about us and wanted to see us succeed. I truly miss undergrad and would love to spend another day in the lounge with all my pals again.



It was a wild ride, but I loved it. Studying things that you're truly interested in is an incredible opportunity, and the friends and goofy memories you make along the way help you get through the tough times. The WISc professors are great at what they do, and are always open to conversations about school or life.



It was better than expected, no regrets.



It was very hectic at times. I knew what my end goal was and kept going to achieve it. Undergrad taught me so many life lessons, ranging from how to balance sports, work and school.



My undergrad experience was very good. I love Western and that's why I'm going to Ivey. First year you meet so many people and its so inclusive. In every class you meet people who want to help you succeed. No one wants to see you fail and I think everyone having that mindset really helps.



Wonderfully! I was in two small cohorts within a massive school, and it was incredible. I loved everyone in WISc, and getting to know them all personally was a treat. On top of that, I was in the small department of physics. Talking to people from large schools now at Cambridge, I am grateful for how close I was with all my professors, the research opportunities I got, and the community atmosphere.



I'm going to be honest- it was tough, especially as the first cohort. It felt like many of my profs in physics didn't understand what the program was, and the workload associated with the WISc specific courses. I think many of them viewed WISc as physics-lite and not recognizing the value in the interdisciplinary courses and the skills gained through them (writing, professional development, project management, independent studies). As I progressed through my degree, this opinion slowly changed. There were a few times where I strongly considered switching programs or leaving altogether, but I managed to push through. The connections, mentors, and friends I made through the WISc program is what helped me through my degree.

Do your classes actually get more interesting after first year, or is that a myth?



I'd say yes for sure, they get more interesting because you go more in depth on subjects rather than the intro type stuff



So I found my favourite classes to be in my third and fourth years. Third year I took a Philosophy of Biology course and an Animal Behaviour course that forever changed my worldview and how I think about life. Fourth year I got to run my own research project with WiSc's honours thesis. First and Second year are painful and torturous, just have fun and try to do as well as you can.



I think that's true.



I personally found that some of the classes after first year were definitely more interesting.



For the most part I would say that yes, the classes definitely get more interesting after first year. However, there are definitely some brutal mandatory upper year classes that are incredibly difficult that you just have to grind your way through. But as the years go on, you have a bit more freedom to choose classes that are more aligned with your interests. Also, I found that as the class sizes shrunk the learning experience became far more enriched. It's hard to have a good connection with a prof when you're in a class of 600 students, and for me, the smaller class sizes made a huge difference in my enjoyment of classes.



Yes!! I personally started enjoying most (if not all) of my courses as of third year, but I loved a lot of my electives in second year too! First year has a bunch of hoops that everyone has to jump through, but once you start to specialize your classes around your interests, they become a lot more interesting and exciting to invest in. More often than not, if you don't find any courses interesting by second/third year, odds are you aren't following your passion (which occurs more often than you'd realize). It's very common now for people to decide on 5th or even 6th year because they switched majors or just wanted to try new things!

How are you able to balance the heavy workload with a social life (if possible)?



I think scheduling is very important when it comes to balance - schedule days to take off and make plans with your friends concurrently with your study plans. It's very easy to get burnt out without taking a break and being social, but at the same time without scheduling things - it's hard to know if you'll be prepared for an exam/done an assignment and that can be stressful!



Know when to take breaks, time management.

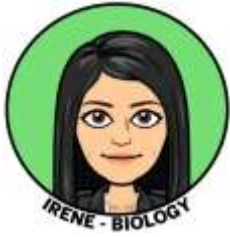


I maintained this balance by taking it one day at a time, having a planned study day, taking care of myself when needed.



First year was all social life and my grades took a hit - I had about a 70% average. Second and third year I learned to push myself academically and I was able to get 90s in most of my classes but my social life suffered a lot. I was only able to go out once a month. I had a girlfriend at the time but that relationship didn't end well because I was focusing on school so much. By the end of third year and into 4th year I found a healthy balance because I'd be used to after classes going to the library or Starbucks and studying until 7 or 8 pm and then going to see friends. Some days I would take a full day to myself. You don't always have to be doing something and it took a long time for me to realize that.

Is there any work you can do as a student in your area of study that pays money?



There are a number of full time research positions at hospitals, and universities.



If you're interested in pursuing work during your undergrad in your area of study, I would recommend reaching out to profs for potential summer jobs in a lab. I was able to get paid work in a university lab after my first and second year, although sometimes it can be difficult to find. In chemistry, you might find summer internships at some companies looking for a student to do some simple lab work. You also have the chance to pursue a paid internship for a year after your 3rd year through the internship program at Western! I haven't found that there are many part-time positions you can find throughout the school-year related to chemistry, but all kinds of work you do is valuable and there are a variety of part-time positions all over campus that you can apply for if you're in need of a job.



Tutoring?

Are there any classes you recommend getting over with/taking in the summer semester?



I never took a Summer course, but Stats would have been nice to finish on its own since there were so many assignments!

Is there a certain grades threshold above which employers/internships are looking for?



None of my employers or interviewees requested my grades, except for research positions, those ask for transcripts but even then there is no "threshold". I had a professor in engineering who had a "preference/threshold for 80%+", but there is no industry standard. Just a potential preference by the PI.

Could you tell me about Grad School?



Grad school in Europe (or at least the Netherlands) is a little different from Canada. My masters program gives me a year strictly for courses and then the following year strictly for research. I prefer it that way, but some like to do research and a few courses at the same time as offered in Canada. I'm taking a lot more courses now than I would have in a Canadian masters and that's nice if you have a lot of stuff you're interested in! Because of this though, I'm not quite living like a grad student yet. I'm not working on any research at the moment so it feels very much like undergrad with more advanced courses. Thankfully, the jump between undergrad in Canada and masters in Europe didn't have too much of a gap content wise. I think Western gave me a good education to tackle my masters.



That's a really broad question.



Originally, I was supposed to start my MSc in September - I applied and was accepted on these deadlines. But in May, my supervisor strongly suggested that I push back starting until January. After a lot of contemplation, I decided that was a wise approach and communicated that to him. He handled all the paperwork, and I deferred my offer to January. I'll be able to do a lot of it virtually and I'll do my experiments in the greenhouses on campus. I can't wait!



Yes absolutely! My grad school is weird. I am in a one-year program that is solely research-based. In a typical week, I spend about 40 hours in the lab or my office. During this time, I am preparing samples for analysis in large magnets (14T) or getting ready for trips to the international super-large magnet facilities (85T). For reference as to how strong these magnetic fields are, see the Wikipedia page on Andre Geim. He won an actual Nobel Prize for discovering graphene, but also an Ig Nobel Prize for levitating a frog in a 10T magnetic field. While in the office, I write a lot of computer code for analyzing data and running various pieces of machinery. Unlike the North American programs, my work is very self-directed and is solely research-based. I am a big fan of it currently!



Grad school is a lot different than undergrad, especially if you are in a research-based program (meaning you do a thesis). I only have two courses per semester for my first year, a big difference from having 5! Most of my time is taken up by my research, which has a lot of independent learning and teaching myself the content I need to complete my project.

How did you hear about the overseas opportunity you are doing?



I wish I had a more interesting story, but it was honestly through a random google search for European opportunities (I was curious about how the subject matter I wanted to study was approached in Europe). I actually was looking more for conferences like the International Conference for Physics Students (which I totally recommend for students wanting a global physics experience for a week), and learned about GRAPPA at the same website. Then I looked up GRAPPA and really resonated with their research questions and just applied for it - and only it. (Definitely do not recommend doing this, it's good to have some backups so you don't spend the time until you get the offer in constant fear). So in short, if you're interested in overseas opportunities, look them up and ask the admissions office or coordinator all your questions! I have literally spammed them and it didn't negatively affect my results, so don't worry! Your questions deserve answers.



Well, who hasn't heard of Cambridge? From Newton to Darwin and so many others, Cambridge is an incredibly famous school. I applied because why not? I was fortunate enough to get this once in a lifetime opportunity, and I am forever grateful that I did. If you want something – apply for it!

What was your experience like with the Women in Physics Conference like?



I loved the Canadian Conference for Women in Physics (CCUWiP). It's open to people that don't identify as women as well, but this conference gives a spotlight to obstacles women face in a physics career. Some useful things I found include a workshop on negotiation (on getting better salaries and work benefits), and connecting with role models and peers who face the ever persistent imposter syndrome. There's also the Canadian Undergraduate Physics Conference (CUPC) which is held virtually at Western this year! It's a great way to learn about graduate opportunities in Canada, and some universities from the states show up too.



I attended this conference in my second year and thought it was great! A good way to meet other women in physics programs at surrounding universities and see what their experiences are. Western's ratio for women in undergrad physics is pretty good (although the profs are definitely Astronomy dominant for women), and it was interesting to hear it wasn't like that at all school's. Their workshops were useful and tailored to things that women in science commonly struggle with, like how to negotiate salary and how to talk yourself up in an interview. I especially enjoyed the grad fair and meeting women profs from many Canadian schools, it felt less intimidating to talk to them because they were like me. I highly recommend applying to attend this conference at least one of your years.