

ACS AMA: Hi Reddit! I am Lindsay Johnson, a Ph.D. candidate at the University of Minnesota. Ask me anything about tailoring professional development in your academic program to your needs!

AmerChemSocietyAMA¹ and r/Science AMAs¹

¹Affiliation not available

April 17, 2023

Abstract

ACS AMA Hi Reddit! My name is Lindsay Johnson and I am a Ph.D. candidate in chemistry at the University of Minnesota (UMN). I received my B.S. in Chemistry from Virginia Tech in 2012; my undergrad and grad research has focused on developing, modifying, and characterizing polymers for enhanced drug delivery. I'm very active in my home Department of Chemistry, serving as the Student Seminar Series Committee Chair, and the chair for the Graduate Student Symposium Planning Committee. I have also been involved with the planning committees of several outreach events (for committees like our Women In Science and Engineering, etc). In the American Chemical Society, I serve on the Graduate Education Advisory Board, and was selected as a recipient of the ACS Younger Chemist Leadership Development Award in 2017 and so attended the ACS Leadership Development Institute in Dallas, TX earlier this year. Today I'd love to talk with you about professional development so you can make the most of your student program and then excel in your career! Whether you're looking to get into academia, industry, science policy, business, or something else entirely, there are going to be certain critical skills necessary to be competitive in that field. I want to help you identify what those are! The process of building your own INDIVIDUAL DEVELOPMENT PLAN starts with identifying your career goals. Then you back-formulate what skill sets you will need. By mapping out a proactive plan to help you achieve your individual goals, you can then develop yourself to be a competitive applicant in your future. Some ideas on how to design your plan can be found in the ACS's ChemIDP tool [<https://www.acs.org/content/acs/en/education/students/graduate/gettingready/chemidp.html>] I look forward to answering your questions on potential careers, available resources, development opportunities, how to get involved, or tailoring your resume. Ask me anything about professional development! I'll be back to answer your questions at 11am CDT (12pm EDT, 9am PDT, 4pm UTC). 11:00 AM here in sunny MN! Let's do this! 12:00 PM That's all for now, folks! I'll check back in later today to see if I can help answer any more questions. Best of luck in all of your professional endeavors!

[REDDIT](#)

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AMERCHEMSOCIETYAMA [R/SCIENCE](#)

[ACS AMA](#)

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I look forward to answering your questions on potential careers, available resources, development opportunities, how to get involved, or tailoring your resume. Ask me anything about professional development!

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CORRESPONDENCE:

DATE RECEIVED:
March 29, 2017

DOI:
10.15200/winn.149070.05440

ARCHIVED:
March 28, 2017

CITATION:

Current HighSchool Junior who plans on a Chemistry major here, what did you do to prepare and how can I improve my chances at getting into the UoM?

[Vexxedis](#)

How awesome that you are already interested in professional development! Oh, the places you will go!

Man, okay, well I don't actually have a lot of experience on getting into the UofM for undergrad, specifically, but I will try to give you some hastily thought out life advice. (I won't cover things like high GPA, school involvement, sports/band/drama, etc, but those are all obviously important.)

Stay strong in your academics. Finish high school strong, and then start college strong. So many

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college students don't take their first year seriously enough, and then they have to work out of a hole for the rest of the four years. That's a tough gig. Set yourself up high, and then you can ride out being at the top with a good GPA. That's an easy break.

You can look at the UofM CSE webpage (<https://cse.umn.edu>) - or ANY COLLEGE'S WEBSITE - to get an idea of what they value (research, industrial connections, etc), and really highlight your connection to those same values in your application. Any college you apply to will have a website that gives hints as to what they are looking for and what they think is important. See if you connect with that, and then convince them you would be a good fit!

Fellow Grad School Gopher here although I'm in social science. You mention the committees you are active within, committees seem like the experience that pays off in ways that are not as clear as publish-publish-publish. How much of committee work is a civic duty vs a way to hone professional skills?

[furdee](#)

Ah - Good morning, fellow Golden Gopher! (Any Hokies out there too!?)

To answer your question, I think this largely depends on you! I personally get a lot of happiness from committee work, and I enjoy the idea of giving back. However, we all only have 24 hours in a day, right? So I always take time to critically evaluate beforehand if serving on the committee in question will be beneficial toward my development also (even if it's just in a small way). A well-structured team will offer everyone the opportunity to grow.

Let's just say (and obviously this isn't perfectly aligned with your situation) that you are a scientist who is looking to go into a business role after you graduate your PhD. Well, it is usually not the case that a traditional science PhD program will offer you the opportunity to dabble much in a business environment. So maybe you can look for that in your committee/volunteer work! Is there an organization that works on technology commercialization? Is there a committee in the business school at your university that you could bring some skill set to? Tailoring your involvement to match your career target makes a lot of sense, both from a personal satisfaction sense, and also from a professional development sense.

Hi Lindsay! As a PhD chemist graduating soon, I have come to realize that it is difficult to develop some of the 'soft' skills needed to be successful in industry or academia through just the typical PhD program. Through your experiences with ACS and other societies, are there avenues to help young scientists to develop things like; presentation skills, management (people and projects), leadership, and team-work? Thank you!

[jmden88](#)

What a great question! Yes, sadly it is true that professional development in graduate school is often reactionary (you are asked to do something, you are volunteered for something else, etc). And what if none of that aligns with what you want to do in the future!? Now, obviously I think that you should always been a good team member, and you certainly have the responsibility to contribute to your group as your advisor wishes, but what I would love to see more of is tailored, individual professional development that aligns with ones own career goals.

Now on to your question, there are so many organizations that young scientists can get involved with (the ACS Younger Chemist Committee, the ACS Women Chemist Committee, the volunteer opportunities with AAAS, the local sections of ACS, and many more). If you find one of those that offers opportunities to develop the skills that you would like, go for it! Most organizations will always

take (and love) good, dedicated volunteers.

Furthermore, beyond those there are opportunities and avenues within your home institutions and departments, and beyond those are even the avenues that you yourself create! For example, say you want to go into industry; mentoring is going to be a huge component of your job (even though it is often times only stressed for academia). So, perhaps at your home institution you could survey your professors/committee members/department chair to come up with a 'best-practice' methodology for mentoring. You could make that a department-wide available resource, or even submit it as a poster for presenting at a regional ACS meeting. Not only do you learn a lot about mentoring that way, but when you start applying to your future positions, you have a tangible, demonstrated commitment to mentoring on your resume that will help you stand out from the crowd! You can talk about that in your interview; you can write about it in your cover letter. Showing that initiative is great!

Hey Lindsay! Thanks for doing this! I am a rising undergraduate senior looking to apply to graduate schools in the fall hoping to work in organic chemistry, specifically in drug synthesis and development. Do you have any suggestions for picking schools for which to apply? Also, what can I do to make my application really stand out? I've done summer research, been involved on campus, etc. But I'm always wanting to go the extra mile to improve my application.

[phorward](#)

Hi Phorward! I am happy that you are already considering your future graduate school applications. You already have a leg up in that regard, as you have plenty of time to target certain areas of professional development with respect to your goal.

To answer your question about what schools to apply for, I recommend making sure that you could see yourself working for several different professors at that school. So much of graduate school is dependent on funding, on physical lab space, etc, and sometimes people get caught off guard by unforeseen circumstances in that regard.

One of the best things you could do to improve your application would be to apply for an NSF fellowship, or something similar. If you come into graduate school with a fellowship, you can almost walk in anywhere, as you are a free (and obviously good) graduate student for them! Ask your undergraduate professors for help with this, if they are willing. Best of luck!

Also, be sure to highlight IQ, EQ, SQ, and MQ in your resume. There are many resources that cover what this means, and with your involvement, my guess is that you will have no trouble!

For some more of how to 'stand out', please look at some of the other answers where I more generally address this topic.