

Unwritten rules in academia, UMN, PMB

Going to graduate school is learning a new culture. Insecurity is part of grad school, and it is not only due to the fact that students are international or first-generation students.

Asking questions is okay! *No one knows everything*—even those whose background might suggest otherwise have questions. Everyone is welcome to ask!

Applying to PMB

You should contact potential advisors well before applications are due. It is not unusual for faculty to talk to prospective graduate students a year before they apply. You should establish a relationship with potential advisors and ask them whether you should submit an application, rather than blindly applying to as many programs as possible. Without a prior connection, many advisors will not consider applications from students they have not yet met.

A promising graduate student is a critical thinker and a solid writer. They are hard-working, willing to ask questions, honest, proactive, curious, driven, resilient.

Campus visit: Choosing PMB

Before PMB makes admissions offers, we invite you to visit campus along with 20 to 25 other applicants. PMB pays for your travel, hotel, and meals to visit. This is an opportunity for you to find out whether PMB is a good fit for you. During the campus visits, you will meet with several faculty members and current PMB graduate students. Ask them about their research, but also ask them about the culture of the department and the local area.

During the campus visit, ask our current PMB students what they like and do not like about PMB, the University of Minnesota, the Twin Cities, etc. Likely everybody will have some good and bad things to say. Decide whether the bad things are things that you can live with and whether the good things are important to you.

As much as possible, try to determine whether your advisor is somebody that you will be able to have a good relationship with for several years. Ideally, you would like to have an advisor whose advice you can trust and who will treat you well. Look for a mentor, rather than a boss.

Many PMB faculty members have advising statements posted to their websites. Advising statements outlines what an advisor expects and how they interact with students, such as how often they expect to meet with students, communication styles and preferences, and expectations about things like publishing and participating in professional conferences.

Funding

Funding varies considerably from program to program. You should inquire about funding before deciding whether to apply to a graduate program.

Communicate regularly with your advisor about funding to develop a clear, combined understanding of your funding plan for the whole duration of your degree program.

Funding means having a teaching assistantship, research assistantship, or fellowship that pays you a monthly living stipend, pays your tuition, and pays most of your health insurance premium.

Assistantships require you to work 20 hours per week; you are paid either (a) by the university to teach a course, usually lab sections (teaching assistantship) or (b) by your advisor/mentor/PI (Principal Investigator on a grant) as a research assistant to work on specific projects (which may or may not also be your own thesis research). Most students do not work outside the university while in graduate school.

Graduate school is a full-time job. Although students are paid as part-time (20 hours/week), that does not account for classes, studying, reading, research, discussion groups, and many other things that take a large amount of time.

Assistantships are 50% appointments (20 hours per week) for work that directly supports a course (in the case of a TA) or the project/research grant (in the case of an RA). Your own coursework, time spent on professional development activities, and your thesis research are not included in the ~20 hours per week of the assistantship. To make progress towards your degree and remain in good standing in the graduate program, it is the expectation you have ~ 40 hours per week of commitment to your graduate program (~20 hours for your assistantship and ~20 for course work, thesis research, professional development, etc.).

Doctoral students in PMB do not pay tuition for graduate school. Unlike law school, medical school, or other professional degrees, your tuition is paid by PMB, your advisor, or a fellowship. This tuition coverage is tied to a teaching assistantship, research assistantship, or fellowship and to making sufficient progress on your degree.

Tuition coverage most often does not cover student fees. These fees are in the range of \$600 per semester and cover things like parking, campus gym membership, and support of the student government. You may not opt out of paying student fees.

Health insurance is available to you if you have a teaching assistantship, research assistantship, or fellowship and most of the premium is covered for you. You are responsible for about \$150 per semester in fall and spring semesters. You do not have a premium payment in summer semester, but your health insurance is still active all summer.

Payroll can be strange for graduate students and can shift depending on your funding source. Some scholarships are paid to you through your UMN student account. Assistantships and fellowships generally pay to you through payroll and are direct deposited to your personal bank account.

Taxes. Assistantship and fellowship stipends are subject to federal and state income tax. All students must file a tax return. UMN employees *may not* provide tax advice. You may be able to get support in filing your tax return via the UMN Student Association Volunteer Tax Assistance Program (VTAP), <https://www.vtap.org/about>. International students can get information at <https://iss.umn.edu/students/support-services/taxes/overview>

The **National Science Foundation (NSF) offers fellowships** to graduate students in the form of the Graduate Research Fellowship Program (GRFP). You can potentially apply for this fellowship twice: once as you're applying to graduate school and once in graduate school before the end of your third semester. The GRFP gives three years of funding to do your research. It also will make you VERY competitive for admission to graduate school. However, the application process is rigorous and very competitive. The GRFP is a huge stepping stone, but also keep in mind that most successful students do not receive the GRFP and find other pathways to success.

Should you align your research goals with those of your PI's grants? It depends on your level of risk tolerance regarding funding and research support. You should have clear discussions with your advisor to understand the risks/benefits of independent research goals.

There are lots of fellowships, scholarships, and grants available for students to fund their own research. These can be found within the university, from professional societies, or other organizations and companies. These vary in amount (from a few hundred to several thousand dollars) and competitiveness. Before starting a project, you should ask your advisor whether you are expected to fund your own research, or whether they have grant funding to support your work. You should be VERY wary of funding your research with personal funds.

Professionalism

Professionalism includes a mix of acting responsibly, communicating regularly, and showing respect for the community present. Talk with your advisor about expectations, come to scheduled meetings and to work, be prepared for meetings, treat each other with respect, respond to email.

Dress code. Student, postdocs, faculty, and staff generally all dress casually most days. Some staff and faculty will dress in a business casual style. (Prospective students: There is no official dress code for the campus visit. Wear what makes you comfortable and confident; aim for business casual at the most formal.) professional meetings.

Treat it like a job. Ask your advisor about lab expectations, hours, etc. Lab meetings are generally mandatory, one-on-one mtgs with advisor are generally mandatory. If you are going to miss them, give advance warning (more than just an hour, unless you have an emergency), ASK if you can miss don't just decide you aren't going

Productivity and progress

Progress for first-year students means taking classes, reading papers, applying for grants, preparing for summer research.

The Ph.D. program in PMB takes about 5.5 years. Many students finish classes and written and oral preliminary exams by the end of their second year; all PMB students get to this point by the end of their fifth semester (2.5 years into the program). The subsequent semesters are largely devoted to research. Talk with your advisor about how much you should expect to work on your research per week at various stages of your program to graduate in the general time frame you are aiming for.

Defining and evaluating productivity in academia may vary across sub-disciplines. Classic measures of productivity are, of course, publications and presentations at national and international meetings. But, talk with your advisor about additional dimensions of productivity, such as networking; improving speaking, teaching, writing, communication skills; internships; and building other career skills such as project or group management, that can be valuable for both short- and long-term development. Crafting an individual development plan (IDP) can help you set markers for productivity that go beyond papers and presentations.

Networking. Certainly, amongst peers in the grad program, networking is expected. Your advisor should also introduce you to their networks—inviting you to present at PI meetings, introducing you to colleagues at conferences, etc. Talk about these opportunities with your advisor. Getting involved in the PMB seminar series—inviting and hosting speakers—is also a great way to build connections.

Vacation. It is allowed and expected that you will take vacation. Stepping away is very beneficial, regardless of career stage. Well ahead of taking vacation, DISCUSS with your advisor how much vacation you will take and when, so that planning can be done collectively. Maybe labs want/need to coordinate breaks to make sure collective lab activities are met.

Saying no. As a graduate student, you have many opportunities to fill your professional and personal time. You will want to—and should—take advantage of these. But remember, do not stretch yourself too thinly. It is okay to say no. Give yourself time to focus on your degree program and your wellbeing. Talk with your advisor or the graduate program coordinator or peers or others you trust if you are struggling with what to say no to.

Teaching

Teaching can be a challenging and intimidating experience, especially the first time. It is likely that you will be placed in a classroom in which you are the sole instructor, teaching students nearly as old, or older, than you. Ask your fellow graduate students for advice. Do not reinvent the wheel. Borrowing slides and materials from other instructors is perfectly fine!

There is teaching assistant training available each semester, both through the College of Biological Sciences and through the Center for Educational Innovation

In addition to teaching assistant training, there are many workshops available to graduate students through the Center for Educational Innovation.

Teaching is a trial-and-error process. Try new things. Many will not work. Revise them or get rid of them. Don't try the same failing effort over and over. Pay attention to what was successful and keep those activities for the next time.

Teaching is not hazing. Your past teachers may have intentionally made a course difficult to weed out students. You needn't do the same. Teach with the intention of getting students to learn, rather than assigning grades. Don't be the gatekeeper to success in your class. Always keep equity in mind with regard to teaching practices. Intend for your practice to benefit everybody in the class.

Where do you learn?

Graduate programs vary in how many classes you are required to take, but regardless, most of the learning in grad school happens outside of the classroom. Learning happens in reading primary literature that nobody assigns to you, in reading group discussions, helping other people with their work, and in conversations in the hallways. That learning requires an independent drive to know more about a lot of different subjects. It also happens by just being present.

At reading groups, it's ok to show up and just listen. You should read the paper for that day, but even if you haven't, you're still likely to learn something by just being present.

When reading a paper on a topic, note which examples of past work have been cited and read those too. You can also use Web of Science or Google Scholar to see what papers have since cited the paper you're reading. This allows you to look backward and forward on research on a particular subject.

As you start to dive into literature on a subject, use a citation manager to keep track of what you're reading. This will also make it easier to cite relevant literature when you're writing a paper on that topic. Endnote used to be the most popular, but is costly. Many graduate students are now using Zotero or Mendeley, both of which are free and easy to use. UMN Libraries offers workshops on these three citation managers and can assist you in getting started.

Ask your advisor how many papers they expect you to be reading each week. Keep in mind you will also be reading papers for lab meetings, discussion groups, seminars, etc. Read a lot, but also keep this expectation within reason.

Subscribe to tables of contents from well-respected journals and skim the titles in each issue just to see what topics are being covered in these journals. Dive into some abstracts and also a few papers. Ask your advisor, lab mates, PMB peers for a list of journals that are well-respected in your field.

You also can set up citation alerts for keywords, or for new papers that cite foundational papers, to stay up to date on a specific area of research.

Ask questions. You are supposed to not know a lot of things. Often the only way to learn them is by asking. Your advisor often doesn't know what you don't know, but they are eager to provide the information if you ask. The old adage about "no dumb questions" is particularly appropriate here.

Don't skip class without talking to the professor about it. Unlike in large undergrad classes, your absence will definitely be noticed.

Networking

Making connections with other researchers in your field is important for success. Network with colleagues at scientific meetings, but also within your own department.

Networking comes easier to some people than others. Those of us who are shy or introverted may find it difficult to start a conversation. Know that most decent people are excited for you to initiate a conversation or ask them about their work. Also ask your advisor to introduce you to their colleagues or make an introduction with somebody you'd like to meet.

Social Issues

Make friends with others in your program. You're going to be spending a lot of time with them. Commiserate and celebrate together. Also be sure to maintain friendships outside of graduate school to keep perspective on what's important.

Often living with other grad students can be helpful and keep you "in the know".

You will be expected to socialize with others in your program. You do not have to, but be aware that such pressure exists.

Programs vary in how competitive students are with one another. Ask the current grad students what the culture is and decide whether this fits with your own needs. Even in the least competitive environments though, many people find themselves envious of other students' success who seem undeserving. Find a way to be okay with that.

You will experience imposter syndrome. The irony is that so does everybody else, even full professors. Mental health issues are more prominent among graduate students than in the general population. Academia will probably exacerbate any underlying mental health issues you have, or identify new ones. Keep your eye out for symptoms in yourself and in your friends. Seek help early and often.

Work-life balance is important. You may find yourselves working many nights and weekends. If you find yourself working every night and weekend, that is too much. Make time for yourself. Each person has their own vision of work-life balance. This is defined by you, not your advisor. However, a discussion of expectations with your advisor is healthy.

Student parents: Having a family during your Ph.D. program is a highly individual decision, and general advice is not appropriate. Ph.D. projects require significant effort and you should consider any life commitments as trade-offs that you use your personal priorities to evaluate. Clear communication with your advisor about parenting and other family commitments should be part of your discussion of work-life balance.

There is a long history of advisors taking advantage of students, both sexually and non-sexually. Any sexual request is inappropriate and should be reported immediately. If you feel that other requests are inappropriate (e.g., expectations, chores, intrusion into your personal life), ask other students whether this is "normal." Also, normal does not necessarily mean appropriate.

Many people perceive academia to be more progressive than other institutions. This is not always true. And despite efforts to diversify academia and make it more equitable and inclusive, most campuses tend to be very white spaces, especially among faculty and administration. Microaggressions happen in academia, too, and you will have to decide how often to call them out, particularly when they come from people in power.

Graduate school is a personal journey. For some, it will take them on to a career in academia. For others, it will lead elsewhere. Either path can be successful! However, academics often guide students toward careers in academia because it's the route they are most familiar with. You will hear non-academic

careers referred to as “alternative careers.” However, those are the jobs held by MOST people! You can be a scientist with a Ph.D., or with an M.S., or with a Bachelor’s degree. Aside from a research or teaching career in academia, there are lots of careers with non-profit organizations, with government agencies, in many forms of science communication, and on and on and on. Seek out professionals in the career you want and ask how they got to where they are and ask for advice.

Resources

In the PMB Graduate Student Handbook and on the PMB website, you will find a long list of resources available to you across the UMN campus.

Your PMB peers

PMB Graduate Program Coordinator