

Baker Research Group Guidelines and Expectations

Last updated March 2nd, 2020
Jack Baker

Introduction

In an effort to be transparent, this document outlines what I am expecting from you as a member of our group, and more generally what I believe you can do to be successful as a graduate student and member of our research group¹.

I understand that working as a graduate researcher is a new experience to you. Additionally, we are both making a very serious commitment when we agree to work together in this relationship. For these reasons, it is important that we communicate about expectations, and that you have clarity about those expectations before committing to them. I also find from past experience that the most successful and productive graduate students are the ones who naturally tend towards the patterns outlined below, so these guidelines are advice in addition to being requests.

Getting started

Most people get exposure to my group as incoming MS students. Here is my advice for making progress during your first months on campus. For Fall quarter, take the CEE 379 (Introduction to PHD Studies) course, and meet and talk to as many professors and PhD students as possible to learn about their work. You want to understand what work people are doing and what things to be aware of in making the transition to the PhD. Do an excellent job in your classes, to demonstrate your ability to perform advanced work, and do not let other distractions impact your performance in class.

By Winter quarter, arrange an independent study project with an advisor you see a potential to work with. Use that project to learn more about the research field and about how that advisor works with students. You are essentially interviewing for a job at this point, so be dedicated and professional in your commitment to your project.

The above text applies for whatever advisor you choose to work with. If you are working with me as a research student, the text below provides further detail.

¹ I have adopted some of these guidelines from other sources, such as the Stanford Vice Provost for Graduate education, <https://vpge.stanford.edu/academic-guidance/advising-mentoring>, and Professor Arturo Leon http://web.eng.fiu.edu/arleon/Students/Grad_Expectations. You may find those documents helpful as well.

My commitment to you

In our advising relationship, I will commit to help you acquire the skills and expertise needed to do original research, and guide you in performing work suitable for conferral of your degree.

With this overall goal in mind, some specific commitments I make are to:

- Help you identify novel and important topics to research, identify appropriate methods to use in pursuing that research, and identify suitable outcomes from your work.
- Meet regularly with you to ensure advancement of your research.
- Offer feedback on your presentations, papers and proposals, with the goal of both improving the quality of your work and helping you learn to independently produce high quality work.
- Connect you with other experts, and help you acquire data and software, necessary for the successful execution of your research.
- Work to find the funding to support your tuition and stipend, as long as you are making good research progress.

Advising graduate students, and helping publish graduate-student work, is the most important and enjoyable part of my job. I hope it is always clear in my interactions with you that this is the case.

Your commitment to me and our research group

Some of you are paid by Research Assistantships, which means that your research is a job that you are being paid for. Others may have independent sources of funding such as fellowships. But in the interest of equity within the group, and given my finite capacity to work with students, I request the same commitments from all students who join our group regardless of funding source.

Some logistical commitments that I expect are:

- Be regularly available for individual and group meetings, and check with me if a schedule conflict prevents your participation.
- Provide research materials for presentations and papers in a timely manner if you or I need them for conferences or other events.
- Serve as a Course Assistant for me when requested. When that time comes, we will discuss in more detail what your responsibilities will be.
- Maintain data and software sufficient to document your work, and share those resources with current and future group members.

On a more fundamental level, I expect your commitment to persistence. Research is rarely a linear process with pre-defined outcomes happening on a regular schedule. Your persistence in moving your work forward despite setbacks or changes in plans will be one of the strongest indicators of your success in this endeavor.

A more general set of expectations, and general advice, are listed in the sections below.

Meetings

Optimally, we will meet twice every week—once for an individual meeting, and once for a group meeting (though some weeks we will miss meetings due to scheduling conflicts or University breaks).

For our **individual meetings**, our goal is to advance your individual research. As such, be prepared at each meeting to update me on your research progress, highlight the areas where you are having difficulty, and discuss your plans for the next stages of your work. Intermittently, we should discuss your long-term research progress and goals; for example, the planned scope of your thesis, and how you are progressing with regard to that scope. Materials that may be helpful to bring to the meetings include an agenda of items to discuss, documentation of the work you are performing, results from your calculations, and drafts of your writing or presentations. You don't need to update me on everything you have done since the past meeting—we will not have time for that—just focus on items that will benefit from discussion.

For our **group meetings**, our goal is to develop a shared understanding of ideas and research relevant to our research group, and to offer each other insights and suggestions. With this in mind, you will present somewhat regularly or whenever I ask you too. When you are presenting at a group meeting you should aim to educate your colleagues, and you should aim to solicit feedback. This means thinking about what your colleagues would benefit from learning about, and being focused and sincere in soliciting feedback. Similarly, you should be a thoughtful contributor to discussion when others in the group are presenting.

In between meetings, I am always available for consultation. Send me an e-mail, or drop in to see me, if an issue has arisen that is blocking your progress. I am happy to offer quick advice, or intervene to help get a third party's attention to your issue. Ultimately it is your research and you should learn to work through minor issues on your own, but I never want to hear at an individual meeting that "I got stuck on this last week and haven't made any progress"—if you are truly that stuck, do not wait for a meeting to get in touch with me. Additionally, if we have a week where we are not able to meet in person, you are encouraged (but not required) to send me a quick summary of your progress, next steps, and any questions that have arisen.

We will also have occasional social events. You are expected to attend these events also.

If you have conflicts that prevent you from attending any of the above types of meetings, please just let me know and provide an opportunity to discuss. Simply not showing up without sending a message is not acceptable.

Communications

I am physically separated from you by nature of us being in separate buildings, so regular communication takes a bit more effort than if I was in your building. Please do the following to make sure we can communicate as needed.

- Check e-mail regularly, so you can see communications from me, and write the group if you see opportunities to share information or have conversations.
- Use our Google Docs for scheduling meetings.
- Familiarize yourself with our group Box folder. Many of the advice-related documents there were written to address commonly occurring situations for grad students, and so I have spent time preparing those documents for your benefit.

If there are any changes in your work that impact previous discussions we have had (e.g., if a delay in getting results means that you won't be submitting a draft document to me by the date we had agreed on), please contact me to let me know. An e-mail with an update and explanation is often sufficient, unless something more complicated is happening. But keep me updated so I am not surprised if you miss a previously-agreed-upon deadline.

Time Commitment

I expect you to be self-motivated and for the number of hours worked to never be an issue with your progress. A flexible schedule is one of the many perks of our profession, but you will probably notice that most of your most productive fellow research students have regular work patterns and work long hours. I request that you spend at least a majority of the usual workday (e.g., 9a-6p) working in your office, so that interaction with colleagues can occur for your and their benefit. I will not regularly monitor your time in the office, but please speak with me if for some reason you feel that a deviation from this expectation would be appropriate.

It is fine to take a few weeks off per year for holidays or to visit family. I understand that international trips in particular work best as extended trips. September and the Winter Closure period are often the most convenient times for extended trips, as there are fewer meetings on campus that would be impacted by your absence. Please discuss potential travel dates for extended trips with me, so I can check that no conflicts will arise (I will aim to say yes to all reasonable requests). Very frequent holidays, or trips that take you away from campus during mid-week of academic terms, are not ideal and should be discussed with me.

Occasionally there are other professional opportunities that could take you away from campus for extended trips. The most common is the possibility to do a summer internship, though other examples are to spend extended time at another university or doing field work. Internships, if you want to try one, are best done during your first summer or before your PhD work begins. Internships during later stages of your PhD are very disruptive, and the default policy is that they are not allowed. Extended time away from campus for other reasons should be closely tied to your research activities—we should discuss options on a case-by-case basis, and you should get my approval for any such activities.

Classes

Your Master's Degree courses are largely aimed at building general expertise in your field, and your PhD Degree courses are for developing the skills needed to perform your research. Your PhD courses will often be outside of the CEE department (e.g., courses in Statistics and

Computer Science are common in our group). As general guidance, try to identify courses where a high fraction of your time spent is productive towards advancing your scholarship. If your PhD coursework is not contributing towards your scholarship, or I hear in meetings that “I didn’t get much research done this week because my courses were taking a lot of time,” then we will need to revise your coursework plan. Your fellow group members are excellent resources in identifying good classes for you to take, so ask them for advice and review “Policies and procedures\Classes\Ideas for courses.docx” in our Box folder.

PhD students and others funded by research grants should enroll in 10 units of classes per quarter during the academic year, and 3 units during the summer². After your first 1-2 years, you will not be taking 10 units of classes, so enroll in CEE 399 units under my direction to make up the remaining units.

We should discuss your plans for courses prior to each quarter, and you should keep me updated with an overall plan for courses, using the template in our Box folder in “Policies and procedures\Classes\Example list of coursework.xlsx”.

Professionalism

As a graduate researcher, your role has transitioned from a student sitting in a class to a junior colleague who is contributing original work. As such, consider a few things:

1. Be willing to help others in the group, and share feedback. This is part of being in a research community, is good practice in analyzing problems, and helps build relationships and networks that will last for the rest of your career. By all committing to help each other, we all benefit from part of the team.
2. Attend local meetings and introduce yourself to others. If I am present at the meeting, you are very welcome to follow me around and I can make introductions as I talk to people.
3. Take your very best work when you give presentations or speak at meetings. Those present are forming their impressions of you, and a good impression can lead to professional opportunities down the road (professors and consultants are always scouting for young talent at meetings). Our internal meetings are for trying out preliminary work and draft presentations, but external presentations should be for polished material that has been meticulously prepared.

Writing

Scientific writing is important for ensuring that your work is communicated to the community, and the process of documenting your work will help us identify any gaps or limitations in the work that might not be initially present. As such it is an important part of your scholarship, though it can be challenging and time-consuming. I expect that during your time in the group,

² Three units in the summer is considered full-time, and is sufficient for international students to maintain their Student Visa. This also lowers the tuition cost to support you from grants, so is financially beneficial for our group.

you will write several peer-reviewed papers as well as your PhD thesis. We will jointly plan the scope and timing of those papers, but I expect you to be writing regularly throughout your time as a graduate student, rather than saving all of the writing until your graduation is imminent. See “Policies and procedures\Paper writing” for additional guidance on writing.

Travel

As part of your graduate education, you will be expected to travel to conferences and present your research to peers. A typical student will attend one large national or international conference during their time as a student, and several smaller or more local events. I will generally propose what meeting(s) I think will be most effective for you, but feel free to bring ideas for participating in meetings to me if you think they are particularly good opportunities. See “Policies and procedures\Conferences” for further thoughts on meetings and travel.

Other

The PhD is naturally somewhat of an individualized process. The above items are general advice based on past experience, but there are naturally exceptions and you should feel free to both ask questions about these items, and raise alternatives if special circumstances arise (e.g., if you have co-advisors, if your research topic will take you away from campus for an extended time, or if you have a unique personal circumstance). The goal with this document is not to be rigid in expectations, but rather to be transparent and make sure that we communicate with each other about expectations.

If you have any suggestions for additional general issues that you think should be included in this document, please share them with me.

Agreement

I have read this guideline and agree with these expectations (with the exception of any deviations that we have discussed). I agree to further discussion of these expectations if any situation arises in the future where a deviation of these expectations may be warranted.

Jack W. Baker
Advisor name

Student name

Advisor signature

Student signature

Date

Date