

## How to get good advising: information about the grad student and advisor relationship

### Preface

Your relationship with your advisor is vital to your professional success and will remain important throughout your career. Your advisor should be someone you trust and deeply respect, whose research vision inspires you, whose working style and personality mesh well with yours, who supports your professional goals, and who elicits your best in terms of high quality research, creativity and productivity, and sense of well-being. Further, your advisor opens the door for you into the broader computer science research community.

### Intended Audience

This website offers basic guidance needed to develop a positive, productive working relationship with your advisor(s). It also provides tips and techniques for making a smooth transition from grad newbie to professional researcher.

### Other Resources

The [grad advising team](#) provides administrative guidance and compassionate support to help you successfully navigate all aspects of the Ph.D. program. If you aren't sure who to talk to about an issue, we recommend that you start with them. Additional resources you may wish to consult during your time here:

- [Ph.D. Process & Degree Requirements](#)
- [Milestone Procedures](#): See also, [Qualifying Evaluation](#), [General Examination](#), & [Dissertation/Defense](#)
- [Grad Student Affairs](#) (for service opportunities and community involvement)

**Disclaimer:** The norms and research styles in different research areas vary significantly, and each advisor and student is unique. Choose the advice that best suits you and your situation.

## Your Temporary Advisor

Before you arrived at UW, you were assigned one or more *temporary advisors*. Typically, your temporary advisor(s) chose to assume this role because they specifically wanted to work with *you*. Indeed, your temporary advisor(s) may have recruited you to come to UW. For most students,

their temporary advisor becomes their permanent advisor, although this is not required, and there is no stigma associated with making a change.

#### Temporary advisor's role

Your temporary advisor provides information, guidance and feedback during your first year of graduate school. This usually consists of two responsibilities:

- Helping you define your research focus. Your temporary advisor will often suggest a research problem for you to consider either independently or in collaboration with others. There are advantages to joining an existing project, even if it may not be as exciting or groundbreaking as working independently: You will likely get a publication faster, you will learn from multiple researchers (faculty, grad students), you will build relationships within the group, etc. Note that if your temporary advisor has offered you an RA, they will expect you to start your research promptly.
- Helping you choose courses, understand [quals requirements](#), and learn how administrative things work at the Allen School (e.g., who reimburses you for needed equipment, how to plan conference travel). Note that the [grad advising team](#) also provides valuable support and are sometimes even more knowledgeable than your advisor(s) about the most current requirements for quals and all PhD milestones, in addition to various other administrivia.

#### Working with your temporary advisor

- Brainstorm with your temporary advisor about possible research directions of interest as soon as possible.
- Leverage your temporary advisor's knowledge of other faculty members and their research to find the best fit with your interests.
- It may be helpful to ask your advisor what they expect you to discuss in your regular and long-term planning meetings, especially since you are learning how to do research and defining your professional goals. Advisors may also have specific suggestions about how to conduct efficient meetings with them.
- Within the first few quarters, learn your temporary advisor's expectations of you with respect to communication, work habits, graduation requirements, and work/life balance. You need to understand if you want to and are able to meet these expectations.
- Discuss and get feedback from your temporary advisor on your career goals.
- Ask about your temporary advisor's possible plans for sabbaticals and industry leaves that may affect your longer term working relationship.
- Discuss TA opportunities and future funding, including conference attendance.

## Choosing a research focus

### You are unique

Some of you enter the Ph.D. program knowing what research path you want to take, have already published papers in that area, and are anxious to get started right away. Others of you are still deciding, for a variety of reasons. You may have had fewer opportunities to do research in the past, require more background, or be overwhelmed by choice and the difficulty of committing to one topic for what seems like such a long duration. Further, after a few months of working on a project, you may find that it is not a good fit with your evolving research interests and strengths.

You will be tempted throughout your studies to compare your progress to that of other graduate students. While this is natural, it is almost never useful: you will *always* be able to find others that are farther along, apparently smarter, and seemingly more productive and successful in their research. Remember though that you are comparing apples and oranges: your research is on a different topic, your background is different, and you have your own unique strengths and weaknesses. Instead of comparing yourself to your peers, think about whether you are learning, whether you are systematically taking small steps forward in your research, whether you are passionate about your research project, and whether you are more productive than you were a few months ago. See the Frequently Asked Questions and the section on Having a Growth Mindset for helpful advice on this topic.

### The advantages of starting research early

Getting started in research early (ideally in your first quarter) is essential. It will help you determine where your research passion lies, gain confidence, connect with more people at the Allen School, determine if your temporary advisor is a good match for you, and get the ball rolling for future work and milestones. Don't let that stress you out though! Nobody expects you to publish right away. You may hear the good advice that "a PhD is a marathon, not a sprint." To train for a marathon, you should run a bit every day.

### The advantages of breadth

Some of the most interesting research problems lie at the interfaces between subfields. Even within one field, innovative solutions can draw on techniques or tools from elsewhere. Moreover, breadth broadens your potential teaching portfolio (if you are considering an academic career), and your future colleagues are likely to reflect the full spectrum of the field. Beware of spreading your attention too thinly, however; your dissertation demands of you a laser focus on a specific area rather than generalism.

### Discovering what kind of research excites you

- Attend **colloquia** (CSE 519 & 520): Often, a world expert will give a talk that could captivate your interest and sway your future course.
- Attend **quals presentations, generals presentations and dissertation defenses** of other students in the research areas you're interested in. Or, attend practice talks and give feedback.
- Take **classes** in areas you're curious about.
- Read **recent papers** by the faculty members in the areas you're curious about. Ask your temporary advisor about what other (non-UW) papers would be good to read, or where to find the best papers to read (e.g., which conference proceedings, etc).
- Show up to the **poster sessions and talks for the school's industry affiliates research days**, which usually happen in October. Other students will be showing off their current projects, so it's a perfect time to ask them about what's going on in their groups.
- Attend the school's industry affiliates **research day**, where Ph.D. students share their work and connect with industry researchers.
- Register for the department's **seminars** (CSE 590), colloquially known as "five nineties." Most of these involve students leading informal discussions about papers each week. Sign up to present a paper on a topic that's new to you.
- If you can get funding (here is [one option](#)), **attend a conference** in an area of potential interest. This will help you learn about current work in an area while meeting people from its research community. There may also be opportunities to attend conferences remotely, which saves time and money, but this option greatly diminishes your chances to build networks, exchange research ideas, and socialize.
- **Brainstorm** with your temporary advisor and other graduate students and faculty about research projects and directions.

Ramping up your research program

- **[Read research papers](#)**. Read closely and often. You cannot do great work unless you can recognize it. Reading and discussing with others will improve your knowledge of how to frame research results, express and assess contributions, define analytical approaches, and document findings. It may also help you identify unexplored avenues for further research. If the topic is new to you, ask your advisor to suggest background resources (textbooks, course notes, videos, etc.) that can help you catch up. Your job is to work your way towards becoming a scholar and an expert!
- **Collaborate**. Your advisor may suggest a research project that's underway that you can participate in. Pairing with someone more experienced will help you learn the ropes. Even doing some "manual labor" for another student's project can help you to gain momentum.
- **Choose work that excites you**. You cannot do quality research when you're not passionate about the topic. (If you have several passions, you may have to pick one to focus

on, at least for a while. This does not mean that your first topic, or even your PhD topic, will define who you are forever.) Communicate openly with your advisor about what you like and don't like about specific research topics; advisors can't know you're unhappy if you toil in silence. Consider yourself underwhelmed or uninspired if: you are not genuinely curious about the answers to the questions your research is trying to solve, you don't take some pleasure from the process, you're not learning much, or you don't find the high level goals of the project compelling.

- Accept that **drudgery** is part of panning for gold. No research project worth doing is easy (or it would have already been done or found uninteresting). No matter what you work on, you will have to spend some of your time doing work that is not fun, e.g., writing tests and documentation, fixing bugs, collecting datasets, or pushing through proofs of less interesting lemmas. This is the nature of research.
- **Find Ph.D. students/friends to serve as sounding boards** for ideas. Explain your research project to them and get their feedback. Do the same for them. The mere act of articulating what you're doing and why you're doing it can help you clarify your own ideas. Such sharing could even be the start of a beautiful research collaboration.

#### Embedding yourself within a research group

Once you have identified a research area, it is important to become integrated with that research group: Attend all the 590 and 591s that the group runs. If the group has a retreat, workshop or other activity, participate fully. Volunteer for group tasks, such as updating the website or whatever else is needed. Investment in your research group can pay great dividends, ranging from collaboration opportunities to a sense of belonging.

### Formalizing your advisor relationship

#### The permanent advisor requirement

One of the **requirements** for passing quals at the Ph.D. level is that you have a permanent advisor: a faculty member who is willing to advise you *through to the completion of your Ph.D.* and who enthusiastically endorses your quals research project as sufficient to pass at the Ph.D. level. Commonly, students formalize a permanent advising relationship **early in their second year**.

#### Should your temporary advisor become your permanent advisor?

While this is the usual course of events, it is a consequential decision that takes time. *Start* thinking about this issue during your first year. It is not always an obvious decision, and there are

many factors for you to consider. Crucially, there should be solid matches in terms of both research and advising style.

#### Sealing the deal with your temporary advisor

Once you determine that you would like to make your relationship with your temporary advisor permanent, initiate a direct conversation with them to confirm that they are willing to accept this responsibility; the decision must be mutual. Your advisor will also need to be confident that there is a good research and personality match, convinced that you are motivated, diligent, and productive, and that the two of you communicate effectively. Your first year in the program is your opportunity to make a good impression, including seeking out and acting on constructive feedback.

- Once you have a permanent advisor, make the arrangement formal by [completing this form](#).
- If you have a co-advisor, you should formalize this relationship, as well. That can be done via the same [form](#).

#### Changing your temporary advisor

If you need to find a different advisor, start looking for a new one as soon as possible. Your time with your original temp advisor was not wasted: you learned about your interests, and you learned about one particular research style.

#### How permanent is a 'permanent' advisor?

On occasion students do change permanent advisors. Act immediately as soon as you determine this is necessary. The process is the same as choosing your first permanent advisor. Again, here is the [advisor change form](#).

### **Other aspects of the first year**

#### Funding: RAs and TAs

When you were admitted to the Ph.D. program, you were guaranteed three years of academic-year (autumn, winter, spring, but not summer) funding in the form of an RA or a TA. A faculty member may have offered you an RA for your first year or part of your first year if your

research interests and skills match and that person has sufficient funding. However, many students' funding comes from TAing.

TAing is an excellent way to build a teaching portfolio, hone your technical communications skills, and firm up your foundations on technical topics. It is also a proven way to show leadership within a course community and develop mentorship skills.

For these reasons, the Allen School requires you to TA for at least two quarters while you are in the Ph.D. program. We recommend that you get your advisor's advice about what courses might be the best choices for you to TA. You should TA at least once for someone who is not your advisor. This exposes you to a different teaching and course-management style, and can be useful for letters of recommendation when you go on the job market.

As you develop a closer relationship with your temporary advisor and transition into a permanent advising relationship, you will probably want to have a discussion about funding in the future.

#### Juggling multiple responsibilities

During your first year, you will typically be taking courses to fulfill your quals requirements and possibly TAing. This means that you will be busy juggling many responsibilities in addition to conducting your research. An important strategy is to carve out time specifically for research, even if it is only two half-days per week to start. Then, respect that commitment: don't let it slide when there is a class deadline, social event, or some other conflict. Your goal is to do quality work in all aspects of graduate school, and starving any part of it will impede that goal. You may need to learn how to be more efficient at taking classes and TAing while still doing a good job on your research..

If your career goal is to teach at a 4-year college, then you may want to give TAing a slightly higher priority (though you will get more benefit from being the instructor of a class, for instance in the summer). However, you will not graduate without writing a dissertation on your original research, so it must remain a priority too.

## **Building a successful relationship with your advisor**

### **Conducting research meetings with your advisor**

#### Holding regular meetings

Schedule **regular meetings with your advisor** (usually once per week) even if you think you have nothing to talk about, you haven't made much progress, or you are worried that you will be wasting your advisor's time. Often that is exactly when it is most important to have a meeting.

Note that a meeting need not be long or even fill the allocated time slot. Everyone, including your advisor, is happy to suddenly have a few extra minutes if the meeting ends early.

Regular meetings will give you more ideas, connections, and resources to achieve your goals. It also keeps your advisor up-to-date on your progress and helps them keep your project in mind. Often when there isn't much progress, a meeting is a time for your advisor to help you stay energized and excited about the project since they are likely to take the long view.

- Set up a regular meeting time that works for you both every quarter since your schedules will likely change. Offer several possibilities to respect the other person's needs and preferences. (Some advisors opt to use an on-demand calendar, where you can reserve free meeting slots. In this case, claim a slot every week.)
- If your advisor needs to skip a meeting and you still need guidance, follow-up with them by email to discuss the issues or to reschedule the meeting.
- Outside regular meetings, you and your advisor should establish norms for asynchronous communication (e.g., email and slack). Sometimes a quick exchange with your advisor between meetings can save you a lot of time. Don't hesitate to reach out.

#### Planning your agenda before the meeting

Consider preparing a **weekly progress report** and sending it to your advisor before your meetings. This will help you make the most of your time together. It also forces you to review your work and think about its consequences, in addition to helping you and your advisor track your longer-term progress.

Write down an **agenda** and send it to your advisor in (sufficient) advance of the meeting; you could also bring two hardcopies to the meeting. Some students use a slide deck to guide the discussion. Prioritize the items on your agenda. Importantly, focus first on items that are most likely to help you make progress between the current and next meeting.

#### Sample research agenda topics

An agenda for a research meeting<sup>1</sup> (depending on the research area and the specific individuals involved) may include any or all of the following items:

- **Recap of the goals** and state of the project. Like you, your advisor is juggling numerous responsibilities and context switching constantly throughout the day. Don't be upset if your advisor cannot remember what was discussed in your previous meeting. Over time, you'll learn how to quickly recap events to stay on track.

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<sup>1</sup> Your meetings may also discuss topics other than research. Those topics, while important, are not the focus of this section.



- **An update** on what you've accomplished since the previous meeting and which previous goals have been met. Include, for example, what code you've written, new results and ideas, experimental results, etc. Share graphs showing these results, if applicable. Be sure that you've already thought through what the results mean, why they make sense, and how they move the project forward. Getting new results up until the last minute does not leave you time to consider whether these results are meaningful or even correct.
- **Papers** you have read or talks you have attended that are relevant to your research and what you learned from them. Teach your advisor something!
- **Problem-solving strategies.** Brainstorm with your advisor about how to solve problems, discussing in detail whatever you are stuck on or don't understand. Key advisor added value is helping you figure out a way forward when you are stuck. Be as specific as possible when explaining sticking points. Consider writing this part out for yourself ahead of the meeting. Sometimes even just articulating what you are stuck on can help you get past whatever is blocking you. In addition, don't hesitate to ask for help with low-level details, such as code reviews or debugging help, and your advisor will let you know if they can or are willing to work at this level.
- **Gaps in your knowledge** or advice on what you should be learning in the short and longer term. Your advisor can help you figure out how to fill those gaps by suggesting classes you should take, papers/books you should read, experts you should speak with, etc.
- **Feedback on progress.** Take initiative in asking your advisor for feedback on research progress. Be receptive and open to hearing constructive feedback, and remember not to take it personally. Try to see such input as a way to help you do the best possible work and achieve your maximum potential. Focus on asking and answering clarifying questions so that you can think through the validity/utility of the feedback more carefully after the meeting.
- **Longer-term goals.** Discuss research questions and directions that you'd like to explore in the future.
- At the end of the meeting, if appropriate, briefly **communicate** what you understand to be the takeaways and action items going forward.
- **List of goals** you want to accomplish before the next meeting, as well as longer term goals. Let your advisor know about any class-related or personal obligations that will impact your productivity in the upcoming week.

Taking notes!

It is essential to record what was discussed. Usually you will write brief notes during the meeting. Otherwise, do so immediately after the meeting, while your memory is fresh. Share the summary with your advisor and keep a copy for your notes. This ensures you are on the same page and understand one another. It is particularly useful when writing a paper about your research. It will also spur both your and your advisor's memory for future work.

Keeping a research notebook or journal

It is highly recommended that you **keep a research notebook or journal**. (This can be a physical notebook, a set of text files, or some other form.) Whenever an idea comes to you, while reading papers, talking with colleagues, or daydreaming, jot it down. It doesn't have to be fully conceived or considered. Use the journal to record:

- Meeting notes
- Calculations you have done and lemmas/theorems you have proved
- Short- and long-term goals and timelines
- Lists of papers you need to read
- Ideas for future research
- Questions you want to resolve
- Feedback
- Topics you need or want to learn
- Relevant conference deadlines and submission plans

**If you are co-advised**

Why have a co-advisor?

Co-advisors provide different perspectives, different personalities, and different strengths and weaknesses, giving you the opportunity to take the best from each. They can expand your personal networks in complementary ways. When doing interdisciplinary work, it can be especially useful to have advisors with different kinds of research expertise.

There is also a cost to having co-advisors. It may mean more meetings, or more trouble scheduling meetings. The advisors may each have their own requirements to achieve before you can graduate. In some cases they may offer contradictory advice. (Example: you present an idea to each advisor. One says, "Great idea. Before you proceed further, you should do some quick experiments to validate it, to avoid wasting time if it turns out to be a dead end.." The other says, "Great idea. Before you proceed further, you should work through a proof to make sure that it is sound, to avoid wasting time if it turns out to be a dead end." In such a situation, you will want to have a discussion with both of them to figure out how to prioritize the two alternatives.)

Allen School considerations for co-advising

There are many ways to have a co-advisor, and one (or more!) can be added at any point during your Ph.D. Your co-advisors will be co-chairs of your doctoral committee. They may split your funding or there may be a primary and secondary advisor (with the primary often providing the funding). These are things you should feel free to discuss at the outset with both advisors.

To formalize a co-advisor use the [advisor change form](#).

#### Additional planning if co-advised

Many Allen School students are co-advised. As just stated, benefitting the most from having multiple advisors requires some additional planning on your part. While the exact setup of your co-advising relationship will be unique to you and the advisors, there are some common items to consider early on and then revisit periodically.

- Know each advisor's relative strengths, keeping in mind that you might need different kinds of help from them at different points. If one advisor funds you on the main project you're working on, that may be a different type of advising relationship than you have with a co-advisor who provides expertise in a particular topic.
- Ensure that both advisors are aware of what you are working on and what each of their colleague's contributions to your work will be. This will help with allocating time, resources, and credit.

#### Joint or separate co-advisor meetings?

You and your co-advisors should decide whether to meet together or separately. There can be benefits to both approaches.

- Meeting together helps keep the project status in sync but can result in long discussions between the advisors, rather than with you. (Occasionally these discussions are illuminating about life as a faculty member.)
- If both advisors are present, you will need to proactively manage the meeting agenda to clarify what you want or need from the meeting.
- Meeting separately might duplicate discussions, make it harder to sync up about next steps, or require more bridging communication on your part, but it can help you benefit directly from each advisor's unique expertise and working styles (if you have well chunked-out pieces of feedback that you need from both).
- If you and your co-advisors decide on separate meetings, still plan on meeting as a group occasionally (at least once or twice a year). Always copy both advisors on all progress reports, meeting agendas, and meeting notes.
- It is still important to follow specific guidelines for conducting effective meetings.
- Check in regularly with your co-advisors to assess how co-advising is working and whether their combined perspectives are leading to more effective research.

## Your rights as a grad student

- The right to **regular and open communication** with your advisor

This is one of the most important facets of your working relationship. You can expect your advisor to clearly communicate their availability, thoughts, and expectations to you, and to be open and honest about their opinion of your progress and plans. You can also expect your advisor to meet with you regularly and actively consider your ideas during meetings. While advisors usually have multiple students and projects and may need to be reminded of project status and details, they should be engaged with and knowledgeable about your work. If they are not communicative about these or other topics that would allow you to feel capable in your research, you should approach them for clarification. Communication can become complicated if your advisor works part time in industry or during internships or summers, when meetings may be more infrequent. However, you have the right to expect that they will make time for meeting, provide you with feedback, etc., and you should communicate this need to them if it is not being met.

The right to **tailored research advising**

You can expect your advisor to know your research goals and provide research direction according to your level of independence and experience with relevant topics/skills. This includes helping you overcome technical problems. Your advisor should provide honest but constructive feedback that helps you progress on your research. They should communicate with you about which venues and publication frequency is appropriate for your research and long-term professional goals. Over the longer term, advisors should also communicate their thoughts on program milestones, what they think is an appropriate timeline to complete them and their perception of your progress towards meeting your career goals. They should be very clear about your funding status and help you find alternate sources such as a fellowship or a TA position if an RA is not available.

The right to **mentorship** from your advisor, beyond day-to-day research guidance

You can expect your advisor to help you choose an overall research direction, educational trajectory, and career direction based on your interests. They should understand your educational, cultural, and employment background in their approach to mentorship. Once goals are defined, your advisor should help you find opportunities that will further those goals, such as teaching opportunities or work on service committees. They should also help you develop skills such as: communicating your research and ideas effectively in writing and presentations, writing research proposals and grants, and mentoring junior students. Your advisor should support you in networking by advocating for you (e.g., in PhD milestone evaluations), introducing you to their contacts as appropriate, leveraging their professional networks during job searches, and nominating/supporting you for fellowships and awards suited to your research stage and career aspirations.

The right to **safety**

You can expect your advisor to be respectful of you and your ideas and to be open to feedback from you. You should not feel bullied, harassed, manipulated, or discriminated against in any way. Your advisor should be cognizant of the power dynamics of the advisor-student relationship and should have your interests and steady progress in mind when advising (e.g., determining workload, how to give credit, when to encourage you to reach PhD milestones).

If you feel that your advisor has acted inappropriately or if you do not feel safe in your working relationship, reach out immediately to any member of the [grad advising team](#) who can help you navigate your options.

If your rights are not met

If you feel like your rights are not being met, **options for seeking support include** reaching out to the [grad advising team](#) or taking advantage of the [Allen School resources for community feedback](#). Also, see the section entitled Elevate the Issue.

Note that some situations are not clear cut. But even if you are not sure, it is better to voice your concerns. The [grad advising team](#) is there to help you.

## Your responsibilities as a grad student

The responsibility to **put your best effort into your work**

Your advisor has committed to spending at least five years supporting you in your PhD. They will expect that you actually want that PhD: that you take research seriously, meet co-created goals, and make progress. An important aspect of effort is showing initiative by suggesting and owning your ideas and keeping up-to-date on relevant research.

All advisors expect their students to **work hard and be productive**. The most common cause of failure in grad school is not putting in productive hours. Remember, though, that your progress will be measured in terms of accomplishments, not number of hours worked. It can be useful to *periodically reflect* on how you are spending your time and ask your advisor for their thoughts in case you feel stuck. Ask them what they suggest you prioritize, how long something should take you based on their experience with the problem/task, when to move on or ask for help, etc.

This is especially true in your early years, where you must balance coursework, research, and/or teaching while also getting used to a new place and role. Find a workflow that works for you, and, importantly, don't expect it to look exactly like anybody else's. If it isn't working, ask yourself why and correct it, with the help of others.

- The responsibility to **advocate for yourself** as needed within a mutually respectful advising relationship

As a graduate student, you are in charge of shaping your own career. While advisors should consider your wellbeing and workload over the course of advising, they have their own obligations with respect to funding, incentives to publish, and personal life events. You should make your circumstances clear (e.g., personal obligations, workload in courses) so that expectations about progress and suitable workload are appropriately set. You should communicate your interest level in your work over time and whether you and your advisor should decide on alternate research directions for you. More generally, just as you have the right to regular and open communication from your advisor, you have the responsibility to communicate regularly and openly with them.

- The responsibility to be **open to constructive feedback**

You are in grad school to learn and improve, and feedback is essential to that process.

You must acknowledge when your ideas, strategies or research habits could be improved. Indeed, scholarship demands an unrestricted flow and counterflow of ideas, of benefits and drawbacks. On occasion, being open to feedback can be challenging, especially when it may seem negative or disruptive to existing plans, or when it is taken personally as a reflection of your value or ability.

Practical tips for responding to feedback include reminding yourself why feedback is needed and why feedback is helpful, listening and asking questions to understand, and asking for time to process input if you are feeling overwhelmed or unprepared to respond.

- The responsibility to **be a conscientious community member**

This means participating in lab meetings, supporting your labmates (e.g., brainstorming sessions or paper swaps), and maintaining the lab space and lab resources, such as software and hardware. It also means TAing, sometimes for niche subjects. Further, you should be willing to mentor junior students, review papers, and perform service work. When engaging in these activities, make sure that your behavior is creating a supportive and respectful environment for your research group and the broader Allen School community. One way to learn more about this is to take [EPIC training](#).

- The responsibility to **be honest**, both in terms of intellectual contributions and in terms of how you spend your time

You should be transparent about where your ideas are coming from and give due credit where appropriate, whether you are in a conversation with your advisor, giving a presentation, or writing a paper. In collaborations, you should communicate early and be upfront about decisions related to distribution of workload, use of material resources, and

authorship. With respect to how you spend your time, you should clearly communicate to your advisor about if/when you are working on projects not covered by your RA (if you are funded by an RA).

Also, see the [COE academic integrity and misconduct policies](#).

#### If your responsibilities are not met

If you are not doing your job, you probably know it: you may be making poor progress, avoiding hard discussions, or just not having fun. You and your advisor may both be reluctant to bring up these failures. But if you do not do so, both of you have failed in your common goal of making you a success.

Just as Allen School faculty have the responsibility to let a student know if they are not meeting expectations and help them come up with a plan to improve, if you are at all unsure about this, initiate a conversation with your advisor(s). It goes without saying that this will be part of your yearly Review of Progress meeting, but be careful about waiting until the ROP meeting if things are not right.

## Ongoing conversations with your advisor

#### Communicating with advisors and collaborators

All of us are busy and buried beneath piles of papers, emails, and responsibilities. In most respects, communicating with your advisor adheres to the same principles as communicating with anyone else: keep your messages **short** and **concise** while still including **all relevant information**, and identify what **actions, if any, you want recipients to take**. And, by all means, avoid surprises if at all possible (e.g., raising topics/concerns for the first time at Reviews of Progress).

- Ask your advisor and collaborators about their email habits and follow-up strategies. It is totally acceptable to send a reminder (or two) if you need something from your advisor or a collaborator and they haven't responded to you in a reasonable time frame (which may vary from a day to a week, depending on their assessment of the criticality of your request).
- Inform your advisor(s) and collaborators about your own working hours and response times so that you don't surprise them with a delayed response, especially near a deadline or around holidays or vacations.
- Some advisors and collaborators use messaging platforms such as Slack to communicate, while others only use email. Try to determine early on preferred communication platforms, email frequency, and etiquette so you can make communication comfortable and fluid for

all parties. In most cases, the student should adapt their communication style to the advisor's preference.

- Cultural differences in communication. Establish how to address your advisor, by first name or using an honorific. Correct anyone who mispronounces your name (unless you really don't care about that). Be aware of the fact that even though in some cultures it is not considered acceptable to disagree with a professor (or even a peer), in the Allen School, it is normal. Indeed, you are encouraged to express yourself honestly in your meetings with your advisor, even if that entails disagreeing with them about an opinion or a course of action, so long as all communication is respectful and so long as you can provide an explanation for your point of view.

#### Meeting deadlines

Publishing papers or writing grant proposals is beneficial not only to you, but to your collaborators and advisor(s) (e.g., for funding, tenure considerations, etc.). It is a collective responsibility.

- When you agree with your advisor on a plan of action, e.g., to submit a paper, **make sure you understand exactly what's expected of you**. This might be as simple as asking, "What are my responsibilities relative to our co-authors with respect to the writing/research?" Or "When and where will my time be most useful?" when deadlines are approaching. It is likely that your advisor will expect you to be consistently available in the days preceding a deadline (and you might expect this of them, too).
- Slips happen. If you feel a deadline is unrealistic to meet for whatever reason, have an honest discussion with your advisor about this *as soon as possible*. **Do not commit to something that you know you will be unable to deliver**. Advisors can help you devise alternative research strategies or plan for subsequent paper deadlines. For example, if you are struggling to get last-minute results or revise the writing based on reviewer comments and you feel overwhelmed, it is not unreasonable to tell your advisor that you are unlikely to meet the current deadline, that trying to do so is taking a toll on you, and that you will be able to produce a stronger paper if you target the next conference with your efforts. The only thing worse than missing a deadline is doing so without informing your advisor and collaborators with as much lead time as possible.

#### Submitting papers

If you are submitting a paper with your advisors and collaborators, make sure to have a conversation with them about logistics, timelines, and credit well in advance.



- If you are the **lead author** on the paper in an applied area, you are typically responsible for doing the bulk of the research that goes into the paper as well as taking the lead in writing.
- Be sure to discuss with your advisor(s) and your co-authors any **expectations** that you have for them and they have for you.
- Be especially clear with your advisors and collaborators about the **timeline** for writing, and leave time for everyone to make contributions at the agreed-upon level. No one does their best work in a last-minute rush, and you cannot necessarily expect your advisor (or other senior collaborators) to be available at the last minute. Clear communication and realistic planning are critical!

You should also discuss how to assign **appropriate credit** to each author by selecting a proper author order. Your advisor(s) can help you with these decisions. (In some research areas, this question is irrelevant as author order is always alphabetical.)

Attending to personal matters

We are all human. If a **serious personal/family problem** arises, you should attend to it! Notify your advisor as soon as possible about how your work might be affected or breaks you may need to take. (If you are going to be less productive, don't try to hide it and hope that your productivity will stay up or that your advisor won't notice your reduced productivity. Those strategies do not work!) The extent to which you discuss personal concerns depends on your relationship, boundaries, and your level of comfort. Your advisor cares about you and will try to help, but remember that their professional training is in computer science, not counseling. However, it is good to communicate *early* and clearly about the potential impact on your work.

The University of Washington has a number of health resources you can take advantage of, including free counseling offered on-campus and other benefits through your [graduate student health insurance \(GAIP\)](#). The [Husky Health & Well-Being](#) website is a good place to start when looking for healthcare.

Taking a complete break from time to time is important and indeed encouraged. Discuss your plans for taking **personal time or vacation** with your advisor as far in advance as possible, especially if it might affect an important deadline. Be explicit about the start and length of your vacation. Also discuss how responsive, if at all, you expect to be during your time away. Note that being responsive is not a requirement! The critical factor is setting accurate expectations. Advisors expect that your work will be completed in accordance with deadlines; proactively informing them about break times will help maintain a smooth relationship.

If you need to take leave from the program for a quarter or more, you should discuss your plans with both your advisor(s) and the [grad advising team](#). In particular, the [grad advising team](#) can help you understand the [UW policies about academic leave](#), [maintaining your health insurance](#) if needed, and considerations around [leave for international students](#). See also [Article 17](#) of the

Academic Student Employee Contract for information about medical leaves as they relate to your student employment.

#### Taking summer internships

The three year academic funding guarantee does not include summers. It is important to consult with your advisor about your summer plans as early as Fall quarter, especially to determine the likelihood of being funded as an RA over the summer and/or to discuss internships. The Allen School also offers a very limited number of TA positions in the summer. See [section 6 of our funding policies](#) for more information about summer funding.

Many students choose to pursue internships in the summer. Summer internship searches may begin as early as the middle of Autumn quarter of the previous year since large companies start recruiting around that time.

- Discuss internships with your advisor early on to get their opinion as to when and whether it is a good idea for you to try to get one. (Summer internships are often very useful early in grad school, and are often a distraction late in grad school, but each student's situation is unique.) Many advisors help their students find and apply for internships. [Here are some reasons they are useful.](#)
- Inform advisors about your plans, any internship applications you have submitted, and any internship decisions you make.
- Be clear about communication and work expectations with your advisor during the internship. For example, some advisors prefer that you still meet with them regularly and may ask you to work on your research project based on grant/funding requirements or deadlines that happen to fall during your internship. Others might be okay with letting you completely detach from Allen School-related responsibilities. In either case, discuss these expectations and your preferences before starting the internship.
- On occasion, you and your advisor may disagree on whether doing an internship is a good idea or not. If this is a serious disagreement, it may indicate a problem between you and your advisor that should be further considered. We recommend consulting with the [grad advising team](#) if this is the case.

#### Funding

While the Allen School guarantees funding for the first 3 years of your PhD (excluding summers), this may come from a fellowship, RA, TA, or a combination of sources. Your funding source determines what additional responsibilities you will perform in addition to research and coursework.

To effectively plan your research and schedule in general, it is important to understand how you can expect to be funded. This may involve asking your advisor questions such as:

- What should I expect my funding sources to be for the next quarter/this summer/next year/in the long run? What responsibilities come with this funding?
- If offered a summer quarter RA: Will my summer quarter RA be a 40 or a 20 hour per week position? (Note that the answer to this question could affect your interest in internships.)
- Will you support me for the XYZ fellowship application?
- Will you sponsor my visit to the XYZ conference? More generally, what is your funding policy for attending conferences (e.g., is it necessary to have published a paper, are there any upper bounds on the number of conferences you will fund per year, etc.)?

Advisors may not have the funds to offer you an RA position every quarter. However, they can certainly help you find interesting courses to TA or enlist your help to apply for grants or fellowships that could help fund your research. Ultimately it is your responsibility to drive this process.

See also:

- [Allen School Funding Policies](#)
- The current [UAW Academic Student Employees contract](#)

#### Clarifying your professional goals

It is important for you to discuss your near- and long-term professional goals with your advisor(s) at least once a year so that they can best help you achieve them. For example, tell your advisor whether your long-term goal is to go into academia (research or teaching), industry (research or engineering), startups, or somewhere else.

Your advisor can help you to achieve these goals: the best research paths, whom you might reach out to for an internship, how to set up a collaboration with a different research group or company, etc. They can also help with networking.

Note that your goals and your advisor's goals and expectations may not be fully aligned. Some advisors may expect their students to publish a certain number of papers before graduation (e.g., "a dissertation  $\approx$  3 related papers") or prefer their students to publish in more selective venues. These might even be conditions for working with them. If your goal is to remain in academia and become a professor, these expectations likely align well with your goals. However, these expectations can mean a longer time to Ph.D., and, if you intend to go into industry, publications may not be as important. At the same time, other advisors may not be particularly interested in publishing; in this case, it may be harder to get your advisor engaged in the paper writing process, making it more difficult if you want to remain in academia.

Certain advisors are more flexible than others about adjusting their expectations. If possible, talk to recent graduates from your lab about how well they felt your advisor's expectations matched their career goals and how flexible they were in adjusting expectations.

The Allen School annual [Review of Progress \(RoP\)](#) meetings are an excellent time for such discussions. However, you may raise these issues with your advisor at other times as well.

#### Knowing your advisor's plans

You should know your advisor's plans for the next few years in terms of going on sabbatical or taking industrial leaves. These plans will influence how much time they have available to advise you. It may also mean they are in a different geographical location.

If they plan to go on sabbatical/industrial leave in the near future, you might consider finding a co-advisor to work with you in their absence.

#### Review of progress (ROP) meetings

Ongoing conversations identified in this module, especially those more big picture discussions about how your research is going and your plans going forward, should occur at your [annual review of progress meeting](#) with your advisor each spring.

If your advisor does not set up a RoP meeting, take the initiative to do so yourself!

The ongoing conversations with your advisor identified in this section will undoubtedly also come up on occasion in meetings other than the annual ROP meeting. Hopefully though, many of these will be clarified in a few conversations. If you find yourself repeatedly cycling on these issues, it may indicate a serious mismatch in style.

## Having stressful conversations with your advisor

At some point during your Ph.D., issues will arise that require you to hold a stressful conversation with your advisor. Many techniques you can use to do this apply to other areas of life, as well.

#### Managing difficult conversations

- **Write down what you want to say before the meeting.** It can be difficult to remember all you want to say when feeling stressed or uncomfortable. List key points that you'd like to discuss during the conversation.
- **Rehearse/talk with others.** It can be difficult to come up with thoughtful responses to questions with zero preparation. Think about how your advisor might respond to what

you're saying so you can think through how you might respond in turn. Often, other students have had similar conversations with your advisor and can let you know how your advisor might respond. Other students can also help you consider how to phrase what you are going to say.

- **Set aside a specific meeting time.** If you plan to have a more serious conversation during a meeting time that's normally used for discussing research, let your advisor know in advance, when you send your meeting agenda. As with any agenda item, it is useful to give as many details as possible, to let everyone prepare. It is better to let your advisor prepare rather than being blind-sided, ideally leading to a more constructive meeting.
- **Take your time during the conversation.** During stressful situations, we sometimes forget to breathe, exacerbating feelings of anxiety. Both before you begin the conversation and during it, remember to stay present and take deep, mindful breaths. During the actual conversation, it can be difficult to keep your thoughts organized. It is okay to pause to think through how you want to proceed, especially if it is a point that you didn't anticipate or consider in advance ("can I have a minute to think about this?" or "wow, I didn't anticipate that and will need to consider it for a minute").
- **Try repeating back what you hear your advisor saying.** Acknowledge what your advisor has said by rephrasing and repeating it back ("if I understand you correctly..." or "you're saying that..."). This ensures that you are accurately understanding what is meant, a listening skill often compromised during difficult conversations.
- **Summarize in writing what was said,** as for any meeting. This ensures that you agree on, and remember, the discussions and conclusions of this important conversation.

## If the advisor-advisee relationship no longer works

You may reach a point where your current advisor-advisee relationship no longer works for you. This can happen for many reasons, from changing research interests to incompatible styles of work or interaction. Whatever the reason, remember that students go through this every year. It can be useful to talk to other students who have changed advisors, to the [grad advising team](#), and to friends and mentors outside of the Allen School. Your most important responsibility when this happens is to find an alternative that works for you.

- Deciding whether to change advisors

This is a very personal decision, and there are no set criteria for when one should make it. Some advisor-advisee relationships are non-standard but extremely successful; others look great on paper but do not work for the student. Some basic questions can help you think about making a change:

- *Am I excited about my research? If not, how long has it been since I was?*

- *Could I imagine being excited again in the same research group?*
- *Do I trust my advisor to help me develop my research and career?*
- *How does my relationship with my advisor make me feel? How much stress does it cause me?*
- *Are there other areas/groups/advisors that excite me much more?*
- *What are my reasons for sticking with this advisor? What are my reasons for switching?*
- *If my current advisor has acted in an unprofessional or inappropriate manner, have I discussed this with the [grad advising team](#) or the Associate Director for Graduate Studies as I plan a switch?*

Ideally, any student should be free to work with/switch to any willing faculty member at any time without fear of consequence. In reality, some faculty may be more sensitive than others about students leaving their group. If you suspect this may be the case for your advisor, you might want to talk over the answers to the preceding questions with people you trust and ensure that these formative conversations are kept confidential.

#### Sticking with an imperfect advisor

You might be dissatisfied with your advisor, but still choose to stick with them until you graduate. After all, every advisor has flaws and there are tradeoffs to every decision. You need to weigh these choices carefully; in some cases, just finishing your PhD with your current advisor may be the least bad option.

#### Leaving with a Master's degree

Occasionally, after doing research for a year or more, you may suspect that a PhD is not right for you, for example because you do not enjoy doing research or are having difficulty making progress. Depending on your career and life goals (which may have changed since you entered grad school), stopping with a Master's degree can be a more efficient, productive and satisfying path. If you are unsure whether or not you are committed to the Ph.D. path, or if you are worried that your advisor may not be confident that you can complete a good PhD, talk with your advisor(s), the [grad advising team](#), and colleagues at the school.

Keep in mind that figuring out the right career path for you, including leaving with a Master's, is a success. You have learned more about yourself and your goals so you can move forward in a more positive and satisfying direction.

One option is to go [on-leave](#) with a Master's pass on the quals (or a Ph.D. pass, which gives you a Masters degree), and then take the time to figure out what path will make you happiest. Most students who go on leave do not return (they find a career path that they prefer), but some do return. However, knowing that you *can* return may make it easier for you to do the experiment of experiencing life outside of grad school. No decision is permanent, but leaving grad school can help you learn a lot about yourself and your career goals.

## □ Finding a new advisor

If you have decided to switch advisors and you would like to stay in the program, you need to find a new advisor and this may be the most difficult part of the change. Because you know that your current advisor is not right for you does not mean you know who *is*; a professor may need to advise you for months before you know for sure whether the relationship works. Adding one more level of difficulty, many advisors at the Allen School already have a lot of students and might not be immediately eager or have funding to take on new ones. This does not reflect on you or your abilities and potential.

Here are some tips on identifying advisors who might be a better fit for you in terms of research and advising style:

- **Ask professors** in your field(s) of interest who might be a good fit for you and who might be taking on new students. Most faculty will gladly provide this advice. Before you meet with them, prepare by considering the kind of research that inspires you and the style of advising you seek.
- Go through the Allen School **list of faculty/research areas on our website**. This may be old school, but the Allen School has grown dramatically, and you may find someone you were unaware of who is doing interesting work.
- If you are considering changing research areas as well as advisors, explore fields related to the one you currently pursue. For example, if you are interested in machine learning, you may also be interested in work going on in natural language processing (NLP) or computational biology. This expands your pool of potential new advisors.
- **Talk to students** in the area you are interested in or who work with a potential advisor of interest. Questions you can ask include: Is the advisor hands off? What sort of expectations do they have of their students? How long does it normally take one of their students to graduate? Students might also know whether their advisor is taking on more students, and under what circumstances.
- **Attend events**. This includes area seminars and quals/generals/Ph.D. defenses, but also Allen School-wide events, like TGIF and the Pit Party. These offer informal ways to interact with potential advisors and their students in a casual environment so you can get to know them and possibly break the ice before formally approaching them.
- **Offer to do a short project**. Rather than directly asking an advisor to take you on, ask if they would be open to collaborating with you on a small project to see if you might be a good fit for each other. This demonstrates your research skills, helps the potential advisor get work done, and is a good trial run for the relationship. Note that you will likely need to TA during your transition, especially if you are doing exploratory work for potential new advisors.

Note that Adjunct and Affiliate faculty are also options for potential advisors or co-advisors. It's often a good practice to keep an Allen School faculty member involved, even if they are just

available for the adjunct or affiliate faculty to consult with on Allen School policies and procedures.

Exploratory meetings with potential advisor(s)

Once you have a list of potential advisors, you begin the “interview” process. The most straightforward way to approach a professor is to read their papers and then email them to set up a meeting. It would be especially helpful if you consider in advance the general area or topic you are interested in. However, having specific projects in mind may unnecessarily limit your options. When you meet, remember the assessment goes two ways: they are trying to decide whether to take you as a student, and you are considering whether they seem like a good fit or not.

It is very likely that they will ask your current/former advisor for their opinion about you.

The logistics of changing advisors and groups

Once you have decided on a new advisor and you have both agreed to move forward with the change, the official process of changing advisors is quite simple. Once you’ve had the necessary conversations, formalize the arrangement by [completing the advisor change form](#).

Making this change can result in some difficult or complex situations that you must address as you go through the process.

- **Communicate your decision** to your previous advisor. Do this in a way that makes you comfortable, possibly booking a short meeting or communicating by email. Your choice may depend on your reasons for leaving and your working relationship with your previous advisor. This conversation may not always go as planned, and that is ok, but it is vital that you clearly and unambiguously communicate your intention to leave.
- **Tie up loose ends.** Making a clean break is rare: there are often questions of projects, collaborations, lab responsibilities, and funding that may be ongoing as you move to your new advisor. Tell your new advisor about these responsibilities; they can advise you about what is a reasonable or unreasonable expectation from your previous advisor, how to make this transition smooth, and how they may adjust their expectations of what new work you can perform during the transition. (The [grad advising team](#) and other students will also have useful advice.) In most cases, the eventual goal is to resolve prior commitments as you segue into new ones.



## Seeking help

At least once in your PhD, and possibly more times, you may find that something is not going as planned. Problems may include research blockages, interpersonal disagreements, visa concerns, family issues, mental or physical health problems, and more. Here are some general suggestions of what to do.

### Practice self-care

Self-care is a critical component of your relationship with yourself, your advisor and the school. Taking care of yourself both physically and mentally plays a vital role in your ability to function successfully as a student and a human being.

- Depression and anxiety are [common in graduate school](#), which is an extraordinarily stressful and demanding time in your life. If you are feeling existential angst or doubt, you are not alone! Many other grad students -- and probably your advisor -- have been there before you. The standard advice will serve you well: get adequate sleep, do not over-caffeinate, eat well, exercise regularly, take breaks and/or vacations, stay connected to friends, and consider professional help.
- If you recognize that your physical or mental health might be slipping, let your advisor know while you seek help to address the situation. Do this early rather than trying to hide it and becoming unproductive. Your faculty advisor can help you brainstorm ways to adjust your workload. If you're not comfortable talking with your faculty advisor, see the section on elevating the issue.
- A list of the many resources available to you for self-care can be found on the [UW's Husky Health & Well-Being website](#).

The University of Washing has a number of health resources you can take advantage of, including free counseling offered on-campus and other benefits through your [graduate student health insurance \(GAIP\)](#).

### Talk to your advisor

This is usually the best place to start when dealing with many problems in grad school, especially those related to your research, career, or your advising relationship.

### Talk to other students

Older students, such as officemates or colleagues, have likely had similar experiences or problems and may be able to offer you advice on how they handled their situations. They may also know other students who could offer specific advice. However, everyone is different and may experience different problems or view interactions through a unique lens.

## Elevate the issue

On occasion, your advisor may not be able to provide the relief you are seeking. Further, there may be certain serious problems, such as inappropriate behavior or conflicts of interest, where talking to your advisor may not be a viable option. In such cases, we recommend that you reach out to any of the following resources. Your input to any of these is always invited and will be kept confidential.

- Talk to the [grad advising team](#)
- Talk to the [Associate Director for Graduate Studies](#)
- Talk to a member of the [commercialization oversight committee](#)
- Talk to the [Allen School Director](#)
- Talk to a CSE [student union steward](#)
- Talk to the [University Ombud](#)

## Frequently asked questions

### I am not happy with my current research project.

First and foremost, you must figure out, as precisely as possible, why you are unhappy. What would a great project look like, how would it feel to you, how is the current one falling short? Is it too theoretical/not theoretical enough? Do you want or need more social interaction? What do you need to change? And beware the allure of the new, which may be attractive only because it is less well known.

Second, have you talked to your advisor about this? Talk to your advisor, openly and honestly, about the possibility of shifting your focus or about finding a different project that's a better fit. Keep in mind that you will encounter roadblocks and difficulties no matter what research project you work on; it is important to learn to deal with these head on and give yourself the time needed to succeed. On the other hand, attempting to solve difficult problems does not always work out, and figuring out when to move on to something new is equally important. Besides your advisor, talk to other graduate students and colleagues for advice on this.

### I am not happy with my research progress.

This is a common feeling among all grad students, and it may be unfounded. Grad school, like life, is tough! Things do not always go as planned, and, often, even after doing considerable work on a project, you may have made only moderate progress. This is normal. Further, different types of research may progress at different rates. You may be comparing apples to oranges. Resist the temptation to compare yourself to other grad students.

Your best first step is to ask yourself what makes you think your progress is slower than it needs to be. Has your advisor told you this? Are you looking at colleagues' output? Is it possible that you are depressed and discouraged about everything?

Also, consider whether you are investing your time and effort as effectively as possible. Are you dividing your work into small, manageable, achievable goals, or is time management a problem for you? Are you putting in quality time or procrastinating/deferring/ignoring your research, and, if so, why? Look at your progress through a longer lens. How are you doing today versus several months ago, or last year? Are you learning a lot? Are you coming up with ideas, even if some of them do not pan out? Are you satisfied with the way you are doing your research? Are you getting better at it? A PhD takes 5 or more years, and all of us figure things out at our own pace.

Next, talk to your advisor to confirm or reject your own assessment. Your perception might be off the mark. Listen to their opinion about where you should be given the amount of time you've been working on the project, its complexity, and your research sophistication.

My advisor is not happy with my research progress.

If your advisor believes your progress is slower than it needs to be, schedule a meeting to discuss this topic (and only this topic). Prepare by documenting your achievements and identifying the problems you may have encountered and how you have already attempted to resolve them. Consider discussing strategies for meeting preparation with the [grad advising team](#) or trusted colleagues. If you suspect the discussion might be difficult, refresh your skills on managing stressful conversations.

**My advisor is never available. How can I get them to make time for me?**

Having regular communications with your advisor is critical to your success as a grad student. Be sure to work with them to set regular meeting times. Advisors will typically meet with students every week. If after speaking to them about it, they still will not make time for you, it may be time to consider elevating the issue or finding another advisor

**My advisor expects more of me than I can provide. How can I do my coursework, TA, and make progress on my research, all at the same time?**

This is a complicated, yet common situation. First, you may be juggling many things other than your research. For example, if you do not have funding, you may need to TA while also taking classes and doing research. Events may be going on in your personal life that are demanding your time and attention.

Find a rhythm that lets you succeed through these challenges. Talk to your advisor about it, and to other faculty and more senior students, to get ideas for how to manage your time more effectively. Remember, though, especially if you are a first year student, that you will naturally

become more productive throughout your time in the program as you absorb course material, grow as a researcher, and become a better juggler. You can not expect this to happen overnight, and neither should your advisor.

Above all, keep your personal well being in mind and practice self-care. You know the limits of your productivity best, and the limits of how much stress you can comfortably manage. If you feel like your advisor's expectations exceed this, communicate your limits to them. If there is still a mismatch in expectations, consider finding a new advisor. If you sacrifice your well being, go beyond your limits, and burn out, this will not do anyone any good. Especially you.

**My advisor said they do not want to work with me. Or: I no longer want to work with my advisor.**

Sometimes, advisor-advisee relationships simply don't work out. This is OK. Talk to other professors you may be interested in working with and try to find someone with whom you can develop an effective working relationship. Consult with the [grad advising team](#) or the faculty grad liaison for advice on finding someone new.

## **One advisor's perspective: Have a growth mindset**

(This section was written by Tom Anderson. They are in a few places redundant with other parts of this document, but there is also excellent new information here.)

Here, I distill my experience into a few points worth keeping in mind as you undertake your PhD.

1. **Research is hard.** We are trying to do things that haven't been done before, and we aren't always sure about the best path to take. Mistakes are inevitable, going down blind alleys is inevitable, and from time to time you may even come to wonder whether you are suited for a research career. This is normal. Everyone in grad school goes through both ups and downs. We can almost guarantee that the best work you will do in your life is not what you are doing right now – no matter how important it feels to do it well – but what you will do after you graduate. Making mistakes is part of learning.
2. **Be impatient.** The other people working in your area are also smart and hard-working, so you are always at a risk of being scooped. Furthermore, grad school is a means to an

end, not an end in itself. Being able to get projects all the way to *quality* completion, as rapidly as possible, is part of the job.

3. **Be a self-starter.** Although your advisor can help diagnose problems, ultimately you'll need to self-diagnose. If you have gotten yourself into a rut where you feel you aren't making progress (or as much progress as you'd like), self-diagnosing is a good first step.
4. **Set priorities.** It is good to be full of ideas, but it is not the number of projects you start that matters, it is the number and quality of the ones you finish. A good discipline to develop is to keep a list of all the things you could be working on and rank them with the help of your advisor. Then, only do the most important one until it is done and move on to the next. (This advice is right for most students. Some students like to have a few projects going at once, so that when they are stuck on, or tired of, one of them, the student can be productive by working on a different project. Managing multiple projects requires that you are organized and careful about taking notes to ease context switching.) You may find yourself adding to the list faster than you can complete things. That's actually good. You may find that other people picked up on something on your list and got to it first. That's okay, too. Had you split your time, you probably wouldn't have gotten anything done fast enough to matter.
5. **Beware both overconfidence and underconfidence.** It is easy to feel like you don't belong in grad school, that you are an imposter, that everyone else has it all figured out. Don't stress out about this. Instead, have a *growth mindset*: failing at something doesn't mean you are bad at something, it just means you are in the process of learning it. Grad school will force you to learn a set of skills that undergraduate colleges often simply don't teach and that are difficult to learn: how to pick a topic, how to write a research paper, how to sell someone on your research agenda, how to give a talk, how to find the holes in other people's work when they are doing their best to hide them. Your advisor knows that these are hard to learn. On the other hand, overconfidence can be fatal; if you think you know something and you are wrong about that, it will be hard for your advisor to help you at all.
6. **Manage risk.** In research, you are trying to do something that no one else in the world knows how to do. It is essential to manage risk. Identify up front everything that could derail a project. Work on the riskiest part of the project -- the one that you are most worried about. (The riskiest aspect is not necessarily the hardest or most time-consuming part.) Confronting risk early is known as *fail fast*. It enables you to change your plans early, before wasting too much effort. You don't want to discover at the end of a project that it won't work. Of course, the future is an undiscovered country. Sometimes there are unavoidable risks, or risks worth taking.
7. **The value of postmortems.** Whenever you finish a project, you should ask yourself what you or your team could have done better, more quickly, etc. Of course, some mistakes are inevitable; when you are building something for the first time, there is a lot you won't know. What you want to avoid in the future are those things that, in retrospect, were avoidable mistakes, where you could have done better.

8. **Dealing with feedback.** It is common the first time you submit a paper or talk about a project outside of your research group to get negative feedback. Don't let this throw you. You shouldn't be too surprised that it is hard to convince people of your ideas. What you may not realize is how common it is for even the smartest researchers to give initially negative feedback to some idea and then realize only later (sometimes much later) how misguided that feedback was. Unfortunately, this is often because the ideas were presented poorly. If in the meantime you gave up because of the feedback, what a loss! A concrete example of this is that the paper inventing zero knowledge proofs was rejected the first *five times* it was submitted. Unfortunately, research requires having a bit of a thick skin. Often a critique may be on target, at least in part. It is best to be able to welcome feedback rather than take it as a threat or personal rebuke. Assuming you can handle it (not as easy as it sounds), it is much better to know about an objection than not to know or, worse, be ignored.
9. **Try to figure out how to do your advisor's job.** You may think that research projects are most efficient when there is a division of labor. In economics this is called the theory of comparative advantage. Everyone should do what they are relatively better at doing. While efficient in the short term, this allocation of responsibility can lead to your not learning essential skills, making it less than optimal over the long term. If your advisor is particularly good at doing something, that's probably a really good thing for you to learn via observation and imitation and practice. Even if you aren't heading for a faculty job, technical leadership in industry often requires skills similar to those held by faculty.
10. **Your advisor won't always be right, and they may not realize it.** You should almost always listen to your advisor, but you should also know that they will sometimes be stone cold wrong about something. Ultimately, you are responsible for the quality of work you put your name to. If that means ignoring or going beyond the limitations of your advisor, then you need to be ready to do that. We're advisors, not omniscient or perfect managers.
11. **Develop a growth mindset.** Suppose you try to master something new and difficult to learn. Objectively, you won't be good at it at first, especially compared to others who may have had a head start in learning the skill. You could at that point say, "I'm bad at this, I can't do this, I don't want to do this." But the more rational thing to do – and the advice you would probably give yourself if you were being the teacher in this scenario – is to try to avoid judging yourself. Fear is the mind-killer. Learning anything worthwhile takes time, and where you start doesn't need to define where you end up, unless we let it.