

Mentoring Philosophy Statement

Matthew W. Ohland, September 29, 2017

While much of this philosophy document is relevant to any student (or colleague) I mentor, some sections are specific to students for whom I serve as a major professor. To make this clear, all sections of this document are labeled.

General philosophy

As a mentor, I seek to make a contribution to the development of the whole person. This requires some understanding of the current state of your intellectual and professional development and of your dreams for the future. Each person I mentor is different and different goals require different skills, but I will aspire to help you develop certain universal skills—recognizing opportunities, asking questions, acknowledging shortcomings, and communicating effectively. I will encourage you to be a good follower, but to have the courage to lead when leadership is needed—regardless of your position in any existing power structure.

I cannot be the sole source of your personal and professional development—because the only complete person I know how to be is myself. You should expect to have other mentors with other strengths. For example, I learn so much more effectively from interacting with others than I do from reading that I am not a good mentor of regular reading habits.

While archival publication is the most common standard of academic accomplishment, I will encourage you to recognize a broad range of impact in your work. The impact of publications is typically to change other people's thinking and sometimes to change their behavior, but other professional contributions might more easily result in certain kinds of impact.

Starting out

When I first enter into a mentoring relationship, I will want to meet with you to get to know you, your goals, and your strengths and to discuss the goals of the relationship. I may request a CV/resume, transcripts, and (for students who have developed them) a Plan of Study and portfolio.

Promoting student success

I will encourage you to apply for awards, fellowships, and similar opportunities. Since the majority of the effort in preparing such an application falls on you, I rarely do more than make a strong recommendation that you consider such an opportunity. If you commit to applying for an award or fellowship, I have a separate document that details the information I need from you to be able to prepare a letter of recommendation. Similarly, I will notice and recommend job opportunities and opportunities for networking or collaboration. In the latter cases, I will arrange an introduction if desired. To the extent that you aspire to leadership, service, and other opportunities, and encounter resistance—be it bureaucratic, financial, logistical, technological, or any other kind, I will lessen the resistance if I can and help you manage the resistance to the extent that I cannot lessen it.

Getting feedback

When documents require review, please allow time. A 1-2 paragraph update of an ongoing issue can be sent the day before a meeting. A longer paper or letter may take 1-2 weeks if I haven't seen it before—and especially if it isn't well written. If you are making an argument from quantitative data or theory, prepare figures or tables that support your point. It is important to practice communicating quantitative data through visual displays, I will engage in your work more quickly, and give you better feedback.

I will make extensive notes on what you send me, often electronically, so if this is something you want:

- Provide documents as an MS Word file
- I will track changes as I make minor edits (spelling, grammar, flow)
- To the extent that you have an acceptable writing style that is different from mine, I will try to avoid forcing you to adopt my writing style. I will certainly give you tips where I think you can improve your writing style.
- Where I have trouble understanding or believing what you've written or where I think you have an opportunity to improve the impact of your work, I will insert a comment in the document and ask you to make a creative response.
- During some travel, I prefer to review printed documents—so I can review them on a plane, in a shuttle, in a car, and even during a plenary lecture that isn't capturing my attention—without having to take out and plug in my computer.

Meetings and keeping in touch

To the extent that multiple students are working on the same or a related project, meetings that involve multiple students will be scheduled at regular intervals that are determined by the intensity of the project and the extent to which email communication is sufficient to sustain progress. In addition to these regular meetings of a project or a subset of the research group, there will be times that the entire research group gathers to share its work and to give feedback to others—such as during the preparation of conference presentations.

Noting that every student is different, however, we will schedule weekly one-hour meetings. It is not uncommon for those meetings to be cancelled or rescheduled due to travel, impromptu meetings, proposal deadlines, personal matters, or other reasons—mine and those of the people I mentor. By putting these meetings on my weekly schedule, we will usually manage to meet at least once every two weeks, which is usually sufficient. During times of rapid progress or when deadlines are at stake, additional meetings may be scheduled. Some meetings will be electronic—such as by Skype—this is both a way to avoid missing meetings when I am away from the office and a way for you to practice communicating through different media that are used commonly.

It is important for you to prepare for meetings and to help me prepare for meetings. I ask you to maintain a list of ongoing issues of concern (including various research activities, classes, and even personal matters) and send me an update of this list weekly. Urgent topics can be highlighted.

Work habits and preferences

When I say I will do something by a certain date, I will usually do it—or at least tell you that the schedule is slipping so that you can let me know the potential consequences. If I don't, you are welcome to remind me—there are always more requests on my time than I have time to give, and sometimes things slip through the cracks. I will expect the same from you—to commit to deliver things by specific dates and stick to them. When it comes to work that benefits you but is not required to meet the deliverables of a project, I usually do not set deadlines—this is an opportunity for you to set personal deadlines and hold yourself accountable for progress. This is a critical skill in academia, where certain activities have deadlines (teaching class, conference papers, and proposals) and other activities (such as writing journal papers) must be self-managed. **CAUTION:** Don't hand me paper documents for review unless you are going to stay with me while I review them. Otherwise, I will put them in my briefcase and leave them to rot with other paper files. I rarely get back to something if it's in paper form, and I can never *search* for it unless you send it to me electronically.

Rather than think in terms of work/life balance, I tend to think in terms of work/life integration. Parts of my family and personal life are present at work. If my wife sends a text message, I will always check it, even during meetings and class, but I will set it aside if it's not urgent. If my wife calls my phone during a meeting, I'll send it to voicemail. If she calls back a second time, I'll leave the meeting to take the call. There are issues of personal business that must be handled during business hours, and I will handle them from the office or anywhere else – it is less disruptive than leaving the office to work from home on personal business – particularly if I only need to make one phone call. Badminton and racquetball are included during the day in my regular weekly schedule—because those are generally activities that I won't do when the kids are out of school, because my youngest (Anders) can't join those activities, and there are very limited times when my oldest boy (Carson) or my wife (Emily) can join in. I tend to set work aside from ~5:00-~8:30 (depending on the day) because that leaves me available for kid's activities, dinner, cleanup, and bedtime reading.

On the other hand, my wife goes to bed early, so I generally have a burst of productive activity from 9:00pm-2:00am. This varies depending on other family activities, on my state of health, on when I need to be up in the morning, and on the work I'm doing. If I realize that I'm tired and unproductive, I'll stop and go to sleep. Occasionally, I'll become tired and unproductive without realizing it. In that case, I'll either drift off to sleep on my desk or, in the worst case, produce writing or feedback that is incoherent. Please be on the lookout for when that happens.

I will respect your own personal work habits and timetable, and I will never plan for you to work between 10:00pm-7:00am. If we face a short deadline due to poor planning or other problems, it will be your choice of whether working late is an acceptable solution. In general, we will make sure that the responsibilities for fixing such mistakes lands squarely on the person responsible for the delay or that the person who caused the delay is the person who primarily experiences the consequences of missing the deadline. Similarly, if you can be productive away from the office, keep me updated on your progress, join meetings in person when needed, and join meetings electronically when appropriate, I am generally flexible on work location.

Graduate Assistant responsibilities

If you are paid on a 20-hour Assistantship, you should expect to work 20 hours per week. The classes you take and the associated homework are a benefit and do not count toward the 20 hours. If the Assistantship is teaching-focused, you may be asked to contribute in any way that improves the learning experience that assists me in my teaching. This may include attending class, grading, observing teams, teaching, developing materials for teaching / assessment / reporting, and more. Graduate Research and Teaching Assistant positions come with the expectation of professional development as an important benefit, but may require commitment beyond the 20 hours per week—special training opportunities, preparation for and travel to conferences and side projects you choose to pursue, etc.

Research Assistants have a specific obligation to provide a benefit to the project that pays their salary and tuition. Unfortunately, the work on any particular project is rarely distributed uniformly. In the week that a project's advisory board meets and issues a report, there is likely to be extra work to do. In a week when another project faces similar deadlines, progress on your project may be slow. The rhythm of your project (and your own rhythm) can have various consequences:

- (1) You may be asked as part of the 20-hour appointment to help out for the benefit of another project, with the understanding that the Assistant(s) on that project will return the favor at a later date. As long as these cross-commitments do not take up a lot of time or happen too frequently, this practice is fine—otherwise, it may be necessary to arrange a joint appointment with another project.
- (2) Arrangements may be made for you to put in extra hours in certain weeks in return for a lighter load in other weeks—particularly when there are certain weeks when you anticipate less availability.
- (3) You may be asked to make contributions that will benefit the project at a later date (such as learning how to use Atlas.ti), that are routine management functions (such as doing a safety audit of the research space), or that will benefit many projects (teaching other students in the research group how to use Atlas.ti).
- (4) In some cases, a failure to manage a project well (by me) or impromptu meetings that conflict with project meetings will prevent you from making an expected contribution in a timely fashion. You will not necessarily be expected to “work overtime” to make up for such events.

To the extent that your dissertation work overlaps with the goals of the project funding your studies, it is likely that you will devote more than 20 hours per week to the project—but it will still be less than if your dissertation were on an unrelated topic.

Reviewing for a journal

Reviewing journal manuscripts is a developmental activity that improves writing and critical thinking skills and teaches tricks of the trade in preparing journal articles. The scheduling of this is serendipitous—at some point in your development, I will be asked to review a journal manuscript that will be a good fit for you. I will ask you if you are ready to review a journal manuscript. If so, I will ask the journal editor to add us both as reviewers, we will review independently and then compare notes. Our submitted reviews will still be distinct to provide as much feedback as possible to the author—but we will discuss the tone and approach to your review.

Authorship

There are a lot of factors that go into considering authorship and author order. Fortunately, this has been given a lot of thought by others. I go by the APA guidelines:

Bulger, R.E. (nd.). The responsible conduct of research, including responsible authorship and publication practices, accessed September 25, 2017 at <http://edepot.wur.nl/137683>.

Although these are part of a longer document, I share a summary with my students.

Writing a grant proposal

Grant writing is another useful developmental activity. As your research ideas take shape, we will assess the prospect of writing a grant proposal to support some or all of your work. This is particularly useful if your research drifts considerably from the project(s) on which you are funded. A number of my graduate students had a significant role in writing a proposal that funded their research. Two of them transferred a significant amount of grant funds to another institution where they started a faculty appointment. Having a grant already was a great talking point in the interview process.

Mentoring other students in the research group

Students should practice collaborating with and mentoring others in cross-disciplinary and diverse teams. This is good practice for working with graduate students and colleagues, and part of being a member of a community of research practice. This may involve assisting peers with analyzing quantitative data or by providing additional perspective by coding interview transcripts. In some cases, graduate students may help supervise the work of undergraduate researchers.

Making progress toward graduation

While students have varied goals and timelines, it's important that all students continue to make progress through the milestones of the graduate program: the Readiness Assessment, the Preliminary Examination (dissertation proposal), and the Final Examination (dissertation defense) as well as associated milestones such as assembling a doctoral committee. My preference is that students should be prepared for the Readiness Assessment toward the end of their second semester in the program. By that point, students should have taken foundational courses and should have expressed interest in certain research areas and methods. Taking those into consideration, the Readiness Assessment should be designed to help a student advance their exploration of research areas / methods as well as show what they know and can do. This helps ensure that the Readiness Assessment is not an end in itself, but a useful contribution to a student's development and in many cases, progress toward the development of the dissertation proposal. A student needs only three committee members to proceed with the Preliminary Examination / dissertation proposal, and I will help select those committee members. I prefer to work with students to select the fourth member from outside Purdue to match the student's research topic, methods, and career goals.

Teaching opportunities

If you aspire to pursue a faculty career, and even if you don't, a mentored teaching experience can be valuable – but it will generally not count toward the obligations of a Graduate Assistantship. Even for a Teaching Assistant, the preparation of class materials for which you are responsible may require a commitment beyond 20 hours in a given week. If you want to participate in a mentored teaching experience with me, we will discuss carefully what class or classes will provide the skills you want to develop. This experience could involve a class I teach regularly or it could involve the collaborative development of a new course. Particularly in the large-enrollment First-Year Engineering classes I teach regularly, the course and its population require special consideration—I will expect you to spend a long time observing the class, my approach to teaching, and my approach to classroom management before ever having any significant teaching role. Along with this observation, I will debrief you on certain choices I make in instructional design and execution. I will expect you to ask questions about what you observe—the nature of your observations and your questions will be one of the best indications of when you are ready to teach on your own while I do the observing. When you are ready to teach on your own, you will lead in the delivery of some short topics or activities—during which I may leave the room so that you have full control of how you manage the classroom and so that the students know that I trust you to teach. After the class gets that message, it will be easier for me to observe your teaching without the students thinking you are “on probation”.

Networking and access to research colleagues

I engage with a large collaborative network, and I will introduce you to parts of that network as appropriate. Networking with other scholars is particularly important at certain times:

- As you are planning your job search and need to have feelers out in the right circles;
- When you are pursuing research questions or methods outside my expertise;
- When you are choosing a Committee member outside of ENE;
- When you are working on a collaborative project on which it will be helpful for you to deliver your results directly. If you generate tables / graphs / literature reviews for a project, but do not introduce new insights or make suggestions for new directions, I will generally represent your work myself—in meetings with colleagues, at conferences, and in published papers. Once you own the work by determining the direction and teaching the research team something more than summarizing other research, then you will be included in project meetings.

Getting support when I'm not available

One of the best things about engaging students in a larger network of engineering education researchers is that students have the opportunity to engage with multiple mentors with different strengths and who are likely to be available at different times. In addition to faculty colleagues at Purdue and elsewhere, a research scientist is employed on each of my major research areas. These full-time professional staff provide support to students in my research group in writing IRB protocols, extracting and analyzing data, and other functions.

After graduation

PhD graduates and their dissertation advisors are generally considered to have a lifetime conflict of interest. Like so many relationships forged during a dramatic period of development, the bond between advisor and student is typically a powerful one—if not always a positive one. The mentoring of PhD students does not end at graduation. I expect to help former students navigate their careers and to recommend opportunities to them. As PhD graduates continue their careers, their accomplishments honor me and they enhance my professional network.