Thaler lab approach to graduate students:

My goal is to maintain a laboratory where we do excellent science, support each other in our professional goals, and love what we’re doing. Grad students are the life-blood of the lab, bringing energy, leadership and new ideas. I am honored to have each of you in the lab and consider it a life-long commitment; a great investment with great rewards. I try to treat graduate students as junior colleagues. My goals are to simultaneously help you achieve your professional goals and to advance the research goals of the lab. Hopefully, these two goals greatly overlap!

Graduate students tend to be the most successful in my lab when they both behave independently (in their thinking and decision making) and keep me fully engaged in what they are doing. This means that within the broad overall goals of the lab, you have ample freedom in designing your own research program, but also need to be responsible in discussing the projects with me early and often. I give better feedback when I think about a project frequently, rather than providing flashes of brilliance in a yearly meeting. Frequent updates on projects, both ones in which you have made a lot of progress as well as ones that haven’t changed much, are useful. On my side, I will give you feedback as quickly as I can.

It is important to me that the lab be a supportive group and also engaged with the broader Cornell plant-interactions community. This means spending time in the lab talking about your project and scientific ideas with lab mates. I expect all lab members to attend the EEB seminar, the Jugatae seminar, the Plant-interactions group, and lab meeting. I also expect lab members to contribute to the general running of the lab. All members of my lab are part of the EEB and Entomology community and are encouraged to participate in activities with both groups. Established members can help newer people get integrated.

I have a general policy that everything coming out of the lab goes through me (and hopefully others in the lab) for review. I want the best quality work to leave the lab and this is achieved via feedback. This includes presentations, meeting abstracts, grant proposals, and papers.

In the spirit of feedback improving our science, I strongly encourage everyone in the lab to present their work at the Plant-interactions discussion group and relevant scientific meetings (typically the Ecological or Entomological Society meetings). I recommend at least one presentation per year. I also encourage students to apply for grant funding because this forces us to think through our ideas clearly (and money isn’t bad!) A committee should be established during the first year that meets before February in time for getting feedback on the first field season. Your committee is a great source of support, always provide them with a meeting agenda and materials a week in advance so they can come to committee meetings prepared to think about your work.

Please keep me informed about all of the professional activities you are involved in (grants, seminar invitations, outreach, etc.). I care about your career trajectory and would like to know what you are doing. Also, I am often asked to report these activities to the department and for grants.
The general lab policy on manuscript authorship is to be generous whenever possible. This, of course, will always be tempered by only including authors who have made a significant contribution to the work. Even for students who choose a very independent thesis project, these projects should be within the realm of the lab mission and I expect to be intellectually involved in the project. As a rule of thumb, I expect to be included if the project used lab resources and I was involved in the development of the project. I enjoy working with the graduate students on their research and therefore I hope that for most theses I will be involved in most of the projects. Some students may develop research interests during their degree with which I am only peripherally involved and these are encouraged in balance with the core of their thesis.

Lab meetings are a great and safe environment to share ideas, comments, doubts, etc. and I encourage everyone to feel comfortable using lab meeting for this purpose. However, if there is ever anything you would like to discuss with me in private, please do not hesitate to meet with me at any time. If you are having trouble with something, it is important to me.

Some more nuts and bolts of success in grad school:

Read a lot! Read broadly and in your specific area.

Establish deadlines with Jennifer and communicate progress towards these deadlines. Be proactive about changing deadlines if necessary.

Submit a minimum of three first authored papers to internationally recognized peer-reviewed journals as part of your PhD thesis.

Work in an ethical and scholarly manner at all times.

Independently organize materials and coordinate assistance needed for the successful completion of experiments. When purchases are required, determine costs and consult with Jennifer about ordering.

Have fun!

Typical timelines for PhD and MS degrees (adapted from Lynn Adler). Students often wonder if they are ‘where they should be’ and doing ‘what they should be doing’ for their degree. There is no single path that fits everyone, and there are many models to success. Keeping that in mind, a general progression for a PhD is:

• **Year 1**: Reading and thinking broadly to define research questions, and conducting a pilot study/first experiment during the year and/or summer. If you are exploring a novel area, writing a concept/review article can be a great way to publish early, establish yourself in the field, and set up the questions you will address in your thesis. Set up your guidance committee and meet by February, to get feedback for the first field season. Meet at least annually thereafter.

• **Year 2**: Refining and settling on your thesis questions/plans, based on the first field season and further reading. Finishing up course requirements and taking your qualifying exams.
- **Year 3**: This is ideally the big ‘data collection’ period – you’ve figured out your system, chosen your questions, and are cranking through experiments. Submit your prospectus (thesis plan) by the end of this year, write up your first chapters for publication, and apply for grants such as the USDA Predoctoral Fellowship.

- **Year 4**: Like Year 3, with ideally a shift towards more writing and networking – presenting at conferences, visiting other institutions, inviting seminar speakers.

- **Year 5**: Ideally, writing has been part of the process all along, but this is often the year when the majority of it happens. Data collection is ideally done, and your time is spent publishing, attending conferences, and looking for postdocs/jobs.

For a MS degree, the time frame is much shorter, ideally two years. This generally means only one field season, combined with a lab/greenhouse experiment, preferably in Year 1 so that Year 2 can focus on writing.