In the last issue of *Soil Horizons*, I wrote about graduate school from the graduate student side of things. This time, I am going to try to provide insight into the general expectations of a graduate student by faculty. I can’t cover it all in a short article, but I will try to hit the big points. In order to do that, I would like to set the stage by reviewing the work that faculty members do and what they are responsible for—aside from graduate students.

As part of their position descriptions, faculty members have a split percentage of their time that is assigned to research, teaching, and service and are evaluated for promotion and tenure based on these percentages. This would include starting and maintaining a viable research program in their area of interest, which includes securing funding and establishing a publication record; teaching undergraduate and graduate students; and providing service to the university (and their department) along with the community at large. As you might imagine, this makes for an extremely busy schedule.

Research funding is obtained through research proposals, which take a lot of time and effort to put together, especially for large projects that have multiple research entities. Generally faculty have several research projects that they are working on at any given time. Teaching also requires a lot of time because courses have to be created, maintained, and updated, and there are students to consider, office hours to be scheduled, and grading to be done. There may also be time spent with undergraduate students who want to do undergraduate research projects. Add to that committee work, which involves meeting time and effort spent on activities for the committee, and service to the community outside the university, and there are barely enough hours in the day to get everything accomplished. The point is that the rumors by students that a professor shows up for class and then has the rest of the day off is just not anywhere near the truth.

So what are the general expectations of a graduate student from the faculty perspective?

**Stipends and Timelines**

As a graduate student, you are being paid a stipend (in most cases) as a teaching assistant (TA) or a research assistant (RA) that come from grants, university fellowships, etc. These stipends are, at least in part, supported by research funds that expire in some time frame that was agreed to within the research grant.

• Due to this, time management is essential for a graduate student to understand and take responsibility for. Students should be cognizant of deadlines within the project and strive to keep pace with those deadlines. This is also where communication with the adviser and research team is important if timelines are being exceeded since it is feasible to get deadline changes to research projects with ample notice, not at the last minute.

• Keep in mind that it is not always easy or possible for faculty to fund a student beyond the end of a project when the money is gone and the project is complete.

**Peer-Reviewed Paper**

Unlike in the past, most institutions now require the preparation of a thesis or dissertation that consists of a paper or series of papers that are meant to be published upon completion of the degree. The big advantage to this is that students can leave graduate school with a peer-reviewed publication and usually are listed as the first author on those papers. The paper also provides the faculty with a publication to show an outcome for the research grant.

• Students who don’t finish put an extra burden on faculty to complete the
research paper since these are often required to complete the research project. Faculty would rather see the student gain the experience that comes with going through the publication process, especially at the Ph.D. level.

• We all understand that as you near the end of your research project and are down to writing the thesis or dissertation that there are times when you have writer's block or just cannot stand looking at numbers, statistics, and figures anymore. If that happens, take a break and walk around, but in the end, you need to finish what you started.

• After you have worked hard to prepare a manuscript and have received approval from your adviser(s) to submit it to the peer-reviewed journal that you have chosen for publication, it is not always easy to see the comments made by reviewers. Some comments may seem irrelevant or superfluous, but you need to make that last push and address them. Most times you will find that you end up with a stronger manuscript since a fresh set of eyes is always good for finding areas where the paper can improve. Sometimes you find questions asked by reviewers that can lead to future research projects.

**Classes**

Faculty and the university want to make sure that when you leave, you carry the stamp of the university; in other words, the reputation of that institution. Graduate studies committees talk about this in terms of what classes belong on a program of study. This is also something the graduate school at a university considers in looking at the metrics of each department's graduate programs. Other metrics include the time it took for a student to move through the graduate program and graduation rates among other things. Faculty have to be cognizant of these metrics to keep a graduate program in place and funded and maintain the ability to offer fellowships and scholarships to incoming graduate students.

• Don't be surprised if you are asked to take a class that would seem pertinent to your field of study. For example, I saw more than one Ph.D. student at Ohio State University in the soils program try to petition out of soil genesis, morphology, and classification when they didn't have that course in their transcripts. Faculty have a hard time graduating someone in soils with no coursework a basic area of soil science.

**Basic Expectations**

There are basic things that faculty key in on for graduate students working through our programs. Not only does the university want to sustain a good reputation, but faculty also strive to attract future graduate students, so they need to show that they produce graduates who know what they are doing and are successful in whatever career path they choose. Things we expect include the following:

• Keep up with coursework; most graduate programs where a stipend is involved require that the student maintain a minimum grade-point average.

• Take responsibility for your own destiny and be accountable.

• Be inquisitive, self-motivated, and proactive in what you do. As I pointed out in the beginning of this article, faculty are busy and sometimes you need to insist that we spend time and listen to you.

• Ask questions when needed or ask for help when stuck. However, make an effort to figure it out for yourself first.

• Interact with your committee members.

• Make contacts that you need both inside and outside the university.

• Learn how to teach and communicate; experience is good even if it is outside of your comfort zone. I still remember my first time having responsibilities for assigning grades to a class that I taught as a Ph.D. student and giving my first F. My adviser gave me a great piece of insight, saying that people earn failing grades—they are not given out without a reason. I also know that it took me some time to figure out how to teach effectively. Everyone goes through this, but many universities are now offering courses for Ph.D. students to take and learn about teaching and communication skills. I highly recommend that students consider this option; I wish I had that type of opportunity.

**Exams**

M.S. and Ph.D. exams probably still give students nightmares. There is also the never-ending story that since faculty were given a hard time in their exams, they are paying it back by making it hard for their students. Is this true? Not really. The point is not to make anyone fail or feel dumb, but instead, to make you think. We want to see a logical thought process. This is not a time, however, to do a lot of bluffing about answers to questions. I can almost guarantee that bluffing will get you backed into a corner with your committee. If you don't know an answer, it is best to say so, but follow up with a statement of how you might figure it out. Also, we expect that a student should be able to explain concepts. One-word or short answers won't always suffice in allowing us to understand your depth of knowledge. The bottom line is to be prepared. As advisers, we want our students to do well since it also reflects on us.

• For a M.S. degree, there is typically only a final exam as well as a seminar presented on the research project. The seminar is generally open to all, but the exam is with the student and committee members only. Questions will be pertaining to your research, the methods used, results, and thoughts on applications or future research
needed. We are trying to feel comfortable that you know what you did, the principles behind it, and how it applies to the world around you. Remember that you did the research, so you should know these things.

- The Ph.D. is a little different and scaled up in difficulty; unlike the M.S. degree, the Ph.D. is based on original research. There are (in the U.S.) generally two exams: prelims (or candidacy exam) and the final exam. Prelims are challenging; they are meant to make you think and are used by the faculty to assess your progress and determine whether you should continue in your Ph.D. program or not. Generally there are written and oral prelims. Both are important in determining whether a student is moved to the Ph.D. candidate level, and the rule is that there are no rules on what is asked, although most committee members keep questions relevant. There may also be questions asked that the committee member doesn’t have a definitive answer for, but wants to see what you think. You will be expected to pull from a wider body of knowledge, including the literature, and to synthesize concepts across not only your area of expertise, but other supporting areas. The final exam is more focused on the research, but again, there may be questions that require a student to think beyond the research project to consequences, applications, as well as relationships to other areas of study.

In closing, I should point out that we care about our graduate students; we have (we hope) in some sense helped you grow both personally and professionally. We really do want to see you succeed, and we will push you, sometimes to your limits, to get you there. We tend to see the potential in you more than you do and want to help build the expertise and confidence that you will need to be successful in your careers. As faculty, we know what you’re going through: we’ve experienced the frustrations, the sleepless nights, the tears—and in the end, the joy of finishing. We are, in the end, quite simply, proud of you.