FAQ – Thoughts and Tips for Success as Graduate Students in EEB

Initially created by: Spencer, EEB GPD, eebgpd@indiana.edu, Feb 2023, with contributions from Jen & Ellen, with valued input from: an ad hoc committee of faculty and grads, EEB ORG, EEG Grads, and EEB Faculty

Purpose: Below, we try to summarize some tips, pointers, and suggestions for success in graduate school as we all strive toward meeting the goals of our EEB Graduate Program. The document combines thoughts and tips for students at various stages. We imagine many will want to return to them over time, as experience grows and perspectives change. Some focus on broad expectations for graduate school, others on the important relationship between Advisor and Advisee (graduate student).

Below, in **section 1**, we start with basic expectations for graduate students (beyond the EEB Grad Guide).

In **sections 2-4**, we offer deeper/more nuanced suggestions and pointers. Not every advisor or student may agree with all suggestions in those sections – these are only suggestions (not policy)!

The (optional) **Appendix** contains a list of additional prompts that some advisors and students might find useful to discuss (and return to over time)

Goals of our EEB Program: We want to foster creative original research that changes thinking in our fields. We strive for a top tier program that provides a supportive, collegial environment; that is a hot spot for new ideas; is known for outstanding mentoring and students; and that shares ideas and facilities and across lab groups. We can only achieve these goals with an engaged, energetic, and enthusiastic community of graduate students.

(1) Baseline expectations for graduate students[1]

The following describe skills, points of view, and understanding the make take time to develop – hence, they are not insights, etc., expected of every incoming student (not yet).

(A) Progress towards degree completion - *Graduate students are expected to:*

- ***Advising*:** Select and advisor and committee members.
- ***Progress*:** Devote an appropriate time toward achieving excellence in the classroom and in research while working towards a PhD. An SAA-AIship requires up to 20 hours per week, but that time commitment is separate from coursework and research work.
- ***Responsibility for information*:** Take primary responsibility for informing themselves of EEB, College, and UGS policy as articulated in the EEB Grad Guide and associated documents (FAQs).
- ***Responsibility for requirements*:** Take initiative to ask questions about academic requirements and their SAA position, and seek to fulfill all of them fully.
- ***Timeliness*:** Fulfill all EEB requirements and related paperwork in a timely manner.
- ***Annual review*:** Schedule/participate in annual committee meetings (for review, IDP, etc.) and keep faculty advisor and committee informed about progress toward degree completion.
- ***Leave*:** Inform faculty advisor and work with GPD for any Leaves. Discuss time off with their advisor.
- ***Visa:*** For international students, recognize visa constraints on time to completion.

[1] *This section modified for EEB and IUB from a similar document at Virginia Tech*

(B) Research and Ethics - *It is expected that graduate students will:*

- ***Communication**:* Communicate regularly with faculty advisors and committee members, especially on matters related to research, academic progress, concerns, and problems within their graduate program.
- ***Guidelines:*** Initiate conversations about clear guidelines of expectations from the supervising faculty member on the research activities, including timetables for deliverables.
- ***Ultimate responsibilities*:** Recognize that the faculty advisor and committee members are responsible for guiding graduate-student research but that students are responsible for conducting the independent research required for the graduate degree.
- ***Limitations on faculty and staff time**:* Recognize the time constraints and other demands imposed on faculty members and program staff. Hence, it is important to know when it is appropriate to ask (for help, for things) – not too soon, but not too late.
- ***Ethical behavior*:** Exercise honest and ethical behavior in all their academic pursuits, whether these undertakings pertain to study, course work, research, engagement, or teaching
- ***Reporting*:** Contribute to the maintenance of an ethical environment by reporting any unethical actions they observe or are aware of.
- ***Proper authorship:*** Appropriately acknowledge the contributions of faculty and other members of the research team in all publications and conference presentations. Some contributions deserve co-authorship, some a mention in the acknowledgements section, some just a mention in the dissertation acknowledgements section; match the acknowledgement to the contribution.
- ***More on authorship:*** Work with faculty to agree to authorship strings early on – as soon as possible, likely at the start of a project, but much prior to submission of scholarly contributions (e.g., papers, abstracts of presentations). Discuss openly authorship positions or acknowledgements commensurate with levels of contributions to the work. Authorship should never be only honorary, but should reflect actual contribution to the work according to the standards of the profession.
- ***Contributions to research programs of faculty:*** Recognize that research results, with appropriate acknowledgement, may be incorporated into progress reports, summary documents, applications for continuation of funding, and similar documents authored by the faculty advisor, to the extent that the student's research is related to the faculty advisor's research program.
- ***Permitting*:** Work with faculty to understand and follow Bloomington IRB (human subjects), IACUC (animal care), ORC (research compliance), etc., permitting and compliance.
- ***Conflict of Interests*:** Avoid situations that can result in conflicts of interests following University policy.

(C) Teaching and Training - *Graduate students are expected to:*

- ***Training and evaluation:*** Seek and receive appropriate training and evaluation for instructional roles they are asked to undertake.
- ***Relevance to career goals**:* Pursue, to the extent possible, teaching and training opportunities that are relevant to their career expectations and that enhance teaching to diverse learners and populations.
- ***Quality of teaching*:** Devote sufficient time and commitment to instructional duties to provide high quality education to their undergraduate students.

(D) Professional Development - *It is expected that graduate students will:*

- ***Enhancement of training:*** Pursue professional training programs, seminars, and courses that will enhance their professional and personal growth and development and help them build networks of contacts.

- ***Additional mentors:*** Seek out mentors and advisors to help them prepare for professional careers and responsibilities.
- ***Contributions to the field:*** Contribute, to the extent possible, to the discourse of the scholarly discipline through presentations, publications, collaborative projects, and other means (as applicable).

(E) Assistantships and Financial Support - *Graduate students on SAA-ships are expected to:*

- ***Request guidelines***: Request clear guidelines for the responsibilities of the graduate assistantship from the appropriate faculty or staff member.
- ***Fulfill duties***: Fulfill the responsibilities and requirements of the appointment as stated in the contractual agreement with the department and university. Students on assistantships are expected to work up to 20 hours/week.
- ***Professionalism:*** Act in a professional manner in all aspects of their duties as graduate assistants.
- ***Judicious 'no':*** Elect to decline tasks that are not related to or are in excess of their contractual obligations. This includes work on assigned projects that, on average over the course of a semester, are in excess of the hours for which they are being paid.
- ***International students:*** Adhere to the requirements of immigration regulations for F-1 and J-1 students, including limitations on employment, and consult immigration advisors at OIS
- ***Fellowships:*** Recognize that fellowships carry with them responsibilities that might be different than assistantships. Fellowship recipients are responsible for learning about and complying with all requirements associated with their appointment.

(D) Community - *It is expected that graduate students will:*

- ***Student code:*** Abide by the student code of conduct
- ***Collegiality and collaboration:*** Uphold, in their own classrooms, research groups, and laboratories, an ethos of collegiality and collaboration.
- ***Contribution to EEB, Biology, and IUB:*** Contribute to the department and university community to the extent that each is able. Contribute to the mission of IUB by providing high-quality teaching to undergraduate students, supporting the scholarly activities and fellow graduate students whenever possible, and upholding the public-service aspects of the university mission.

(2) Tips for success in graduate school, being a graduate student, and grad-advisor relationships

Beyond descriptions of minimal expectations and requirements in the EEB Grad Guide, we suggest that the most successful students actively participate in our EEB community (see **Box 1**). We also provide various tips for each year class, 1 – 5 (**Box 2**). The following remaining tips are meant to provide other suggestions.

Students may wish to consider that:

- ***Advisor as 'boss'*?** In EEB, many if not most advisors usually do not act as or perceive themselves as a typical "boss". Hence, students might benefit from considering them more as senior colleagues, mentors, guides, and coaches. Some students may become disappointed if they expected a 'boss'.
- ***Who is 'in charge' then?*** Instead, students will likely benefit from acting as 'captains of their dissertation ships'[2]. Ultimately, students do hold that exciting responsibility for their own progress. Hence, students

[2] Of course, note that funding constraints, objectives of grants, etc., mean that not all graduate students have complete independence.

typically work independently and interdependently, fueled by internal, self-motivated passion and curiosity for their own science and for solving problems that deeply interest them.

- ***What is a dissertation*?** Students work towards completion of a dissertation, but 'what a dissertation is' can feel nebulous sometimes, is not precisely defined, and can vary from lab to lab and student to student. Students can learn more by asking questions. Fortunately, advisors help to guide students towards creation of the four (range: three-five) papers, published while a student or later, that make up the chapters of the dissertation.

- ***It can be intellectually challenging at times.*** Student might find that graduate school is intellectually challenging at times. Students hopefully start to learn in new ways, to challenge themselves creatively like never before, and to push beyond what is known. That process is incredibly fun, but it can take some time to adjust to very different ways of learning and of evaluating one's progress (on often enlongated time scales, with delayed gratification). Students may even find themselves stuck and frustrated at times. Sometimes, students may feel frustrated with advisors because of these challenges (even if advisors are not causing the challenges for difficulty's sake). If so: that is normal. This process serves a central role in learning new, important things.

- ***It is important to reach out for help when needed:*** Students should ask for help if they sit stuck (academically, with research) for too long. Some students worry that their advisors are 'too busy'. Most advisors usually do want to help, but they may not necessarily anticipate and interpret unspoken needs and

Box 1: Participation in the EEB community and 'showing' up as colleagues, for colleagues

Healthy and vibrant departments and graduate programs rely on everyone participating and contributing ideas. More importantly, engagement in EEB activities provide key components of your graduate training. Therefore, you should:

What?	When? *	Why?
Attend EEB seminars	Weekly, even when outside your E, E, or B	Seminars teach you about current research in the field and broaden your expertise.
Attend brownbag	Mandatory in Year 1; Attend research presentations thereafter	In Year 1, brownbag covers hidden curricula in academia. Afterwards, it offers the best venue to learn about your peers' research. These talks can inspire your work, provide more scientific connections, and help identify effective presentation strategies.
Attend receptions , retreats, First Friday, other events	Whenever possible	"Talking science" is a hard skill to learn. Use these opportunities to practice. Plus, these informal conversations can lead to some of the best ideas and collaborations.
Meet with seminar speakers	Multiple times per semester	A great opportunity to practice talking science, to make connections with future post-doc advisors, and to practice interview skills. Consider meeting with them with a peer, and prepare questions in advance.
Attend EcoLunch, journal clubs, etc.	Weekly (when schedules permit)	Such groups provide informal learning opportunities. Choose those advocated by your advisor and/or ones that intrigue you the most.
Participate in GRW	Once per year	The opportunity to help choose your future colleagues, connections that you take with you, throughout your career.

* One cannot always attend everything. However, good faith effort to attend regularly will strengthen the EEB program. More importantly, it will enhance your graduate experience, provide those un-taught skills needed for your next career stages (e.g., talking with scientists outside your field), and just lead to more fun overall.

wants. Therefore, students should feel encouraged to ask for help, explicitly and concretely, when they need it. Furthermore, students should speak up when uncomfortable and address red flags as soon as possible.

- ***Support from the broader community*:** Fortunately, advisors do not offer the sole source of information regarding 'what a student should be doing' – students can talk formally and informally with Committee members, instructors, grads in the lab, other grads in the program (esp. senior students), members of journal clubs, etc. The broader community may also help students as they consider career paths that are not academic. Students also get to enjoy the community that they help to create – by organizing, by participating, by showing up.

- ***Becoming a professional:*** Since it can be implicit or non-obvious sometimes, students may want to ask advisors, mentors, et al. about how to act / become professional.

- ***Receiving feedback*:** Almost everyone needs some help to realize their scientific and professional potential. That help comes, in part, from constructive feedback. Students hopefully will want, expect, and seek out constructively critical feedback from their advisors, mentors, committee members, and labmates. However, it can be hard to receive high quality feedback when requested right before deadlines. Hence, it is best to work ahead.

- ***Building a funding record*:** Students should be applying for funding (fellowships, grants, etc.) as they want to build their own record of funding successes (see examples here). Advisors can help ensure students remain aware of these opportunities. When writing grants, advisors and students may end up passing many drafts of grants between each other.

- ***Students are ultimately responsible for*:** fulfilling coursework; selecting a committee; finding a minor and minor advisor; holding annual committee meetings, complete with submission and archiving of IDP and CVs; reading broadly, both about specific areas but also fields of study more broadly, including classics; establishing support and building professional networks; training and working with undergraduate assistants; planning next steps after graduation (likely not a complete list!)

Advisors should ideally strive to:

- ***Communication:*** Communicate clearly about funding availability to support students, expectations on a variety of different levels, and philosophy of doing science.

- ***Support*:** Do their best to provide a supportive, empathetic, encouraging but honest environment. Support almost certainly requires constructive (but not destructive) feedback. If students do not meet expectations, that deficiency should be communicated (and ideally, documented). However, faculty should understand that students will grow immensely during their PhD. They may hit barriers, necessitating help and advice to surmount them.

- ***Writing*:** Encourage students to write papers sooner rather than later. Work with students extensively on technical writing and the art and craft of telling a compelling story that will change thinking. Students should not expect their advisors to write their papers for them. They should expect that they will write many drafts of each paper with their advisor.

- ***Presentation:*** Encourage presentation in-house and externally, often and in different formats. Talks offer fantastic opportunities to try out arguments and to deepen understanding about research. However, students almost certainly need help to craft a good talk, necessitating practice and multiple rounds of feedback.

- ***Misc:*** Help students navigate permitting and other technical aspects of conducting research.

Box 2 - **Tips for Success In Graduate School - Year by Year**

Graduate school undoubtedly differs from your previous experiences. Below, we offer some tips for each year:

Year 1 - ***Developing ideas for research and building foundational knowledge*** *(see also 1st year faq)*

- ***Read broadly*****:** Read both new papers and classics. Attend journal clubs and groups like Ecolunch, and discuss papers with your advisor or labmates. Subscribe to the Table of Contents of relevant journals. Read at least a few each week in depth (perhaps at scheduled times, maybe with a peer). Use the EEB recommended readings list for some general starting points.
- ***Participate*****:** Expanding your knowledge breadth by attending seminars, even those outside your E, E or B.
- ***Meet with your advisor:*** Discuss your ideas, what you've found exciting in your reading, etc.
- ***Begin pilot work****:* Design an experiment with your advisor or other labmates – "just do it!". Ask your advisor for a dataset to analyze. Analysis of such datasets can sometimes jumpstart a dissertation.

Year 2 - ***Your first qualifying exam (general knowledge: faq), solidifying your research direction*** *(see also 2nd yr faq)*

- ***Apply for funding:*** Practicing your writing skills by writing proposals for research funding and fellowships. (See some examples here).
- ***Begin to practice:*** Practice your presentation skills by presenting a poster or talk at EcoLunch, the EEB retreat, or a regional (e.g., MEEC) or national conference (e.g., ESA, SSE, etc.).

Year 3— ***Your second qualifying exam (proposal defense: faq) as a path for your dissertation*** *(see also 3rd yr faq)*

- ***Full throttle research now:*** Be open to opportunities and suggestions. Pursue leads from previous experiments. Keep presenting your work, informally and formally, seeking feedback early (before it's too late to be useful) while gleaning new ideas. Keep applying for funding (examples here).
- ***Seminar speakers:*** Host or meet with a seminar speaker who might provide feedback on your planned work.
- ***Share drafts, give talks:*** Draft your first chapter and share it with your peers, labmates, and committee members for friendly review. Give a talk at a conference to workshop a manuscript draft.

Year 4— ***Full attention on research progress*** *(see also senior student faq)*

- ***Keep focused:*** You should be making significant progress on your research. If it no longer seems quite so novel and exciting, that is a normal phase that passes.
- ***Analyze now***: Analyze your data as it comes in, right away, so you can plan what work follows.
- ***Plan ahead***: Think about next career steps. Do you want/need experience outside academe? More teaching experience? Other skills? Fill training gaps via internships, teaching opportunities, or workshops.
- ***Finding future post-doc advisors:*** Consider nominating/inviting a seminar speaker as a way to connect with potential advisors. You can also request meeting with them via email before attending national conferences.
- ***Writing progress***: writing, always writing.

Year 5— ***Writing the dissertation, the final countdown*** *(see also finishing up faq)*

- ***Writing takes time:*** For most of us, Chapter 1 took years, 2nd in ~ a year, and Chapter 3 in months, etc.
- ***The role of feedback:*** Be open to feedback both from your advisor, friendly reviewers, and reviewers/editors at journals. It may take 20+ drafts before submission of a paper to a journal
- ***Lining up future plans:*** Begin your search ~1 year before you finish. Listservs post postdoc or job opportunities (and some positions are willing to wait for the right applicant).
- ***A note about finding post-doc advisors:*** You likely need to contact potential advisors. To increase your odds,

(3) Meetings with Advisors | see also mentoring guidelines (faq)

Students should communicate regularly with their advisors. Meetings offer excellent opportunities to set deadlines and establish accountability for them.

- ***How often is normal?*** Ask for the frequency that you need. Many students and advisors hold weekly meetings – that is common. However, meeting frequency can vary, increasing or decreasing as circumstances suggest, and some may wish to run *ad hoc* / open door. Students and advisors should talk about what works best for them.
- ***What should I expect in meetings?*** Students and advisors should talk explicitly about these expectations. However, students should not go into meetings expecting to be told what to do. Instead, in a common model (employed more or less strictly by many): they should propose concrete agendas (and it may help to write these items out beforehand), present progress on results from the previous meeting, identify bottlenecks moving forward, and ask for concrete help or steps in alleviating that bottleneck, if necessary. Students might even consider taking and retaining notes from meetings (and further, some might wish to share those notes with their advisors for future reference and better understanding).
- ***What if my advisor is on sabbatical or is traveling / away for a long period?*** Students should expect to continue communicating and meeting with their advisors, even when they enjoy much-needed and deserved sabbaticals. With zoom and other modern technology, meetings are possible. However, the frequency and nature of those meetings may shift while advisors are away.

(4) Topics that might be useful to discuss

There are many obvious topics that students and advisor should discuss (i.e., selection of dissertation and project topics). Others include:

- ***Collaboration:*** How to approach others for collaboration
- ***How to maintain open & clear dialogue* about:** publications, authorship, reports, application for funding
- ***Conferences:*** When best to go to professional conferences – strategy, goals, networking approach
- ***Solutions to roadblocks*:** Advisors can help to creatively brainstorm great solutions to challenges with research, coursework, university / bureaucratic issues, selection of committee members (but the EEB GPD, Grad Advisor, and DGS all stand ready to help deal with those issues, too).
- ***PhD as beginning, not end*:** Remember that your future research directions need not be constrained by the topic of your thesis. In fact, your thesis experiences may convince you that your interests and talents are elsewhere. Use a Ph.D.-to-Master's switch or a postdoc to change directions, if appropriate.
- ***How to handle freedom:*** Grad students enjoy about much freedom as they can expect in their careers (except perhaps as a postdoc or during a precious sabbatical). However, to harness and positively enjoy that freedom, students may require development of new or enhancement of organizational skills and approaches. Life-work balance is possible when students work efficiently and effectively.
- ***Finding models*:** Students should spend time around others (students, post-docs, and faculty) who are doing significant research and who are excited about their careers. Enthusiasm is contagious. But they should not constantly compare themselves to others. Students have different rates of initial progress on data collection. Various labs may have differing resources (grant funding, technicians, materials, etc.) that may change with the waxing and waning of grants and projects. That heterogeneity is normal, but students should not let that impede their progress. Constant comparison can become unhelpful, even corrosive.
- Some of the predictable, normal, but still ***difficult transition points and stressors*:**
    * Moving to a new community, often far from home.

* The major transitions as they shift from ‘student’ to scientist
* The sometimes hidden curriculum of how to be a graduate student
* Feelings of imposter complex (an almost universal feeling) and confronting that excellent UG grades does not guarantee great preparation for graduate school and mastery of major theories of the field
* Major shifts in what feels rewarding and what is motivating
* Stresses of finishing up and moving to the next position
* Finding help for the personal, physical, psychological, emotional challenges that inevitably arise at least once during graduate school.
* That ‘failure’ is very common, and a great deal can be learned from it as long as students adopt resilient growth mindsets. It is OK to make mistakes (and we all make them), but they can be difficult to confront.
* Sometimes, graduate school may lead students to feel anxious. This is normal, but when it is felt, some students may think something is off or wrong (‘overwhelmed’ is a common descriptor).

More Reading:

(1) More than four decades ago, Steve Stearns and Ray Huey wrote an incredibly influential exchange about advice for graduate students. Both of them went on to become titans in their field. But highly motivated students even now will likely find their breezy advice to resonate remarkably on point, even after all of these years.

Steve Stearns “Some modest advice for graduate students” – PDF

Ray Huey’s response - PDF

(2) IUB’s own Jess Calarco (Sociology) wrote *A Field Guide to Graduate School* (link to electronic version), a book about the hidden curriculum of Graduate School.

APPENDIX – Optional prompts for More Dialogue Between EEB Advisors and Graduate Students
EEB Graduate Program, adapted by Spencer Hall (eebgpd@indiana.edu)
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Directions for those wishing to use this exercise[3]:
Some of these discussion points better apply to more experienced students than incoming new students. Also, they may facilitate ongoing conversation, and answers may change through developmental phases of each student. (see also mentoring guidelines [faq])

Read each pair of statements on this sheet. Each expresses a standpoint advisors and students may take. Please estimate your position and mark it on the scale. For example, with statement 1, if you believe very strongly that it is the advisor's responsibility to select a good topic you would put a ring round '1'. If you think that both the advisor and the student should equally be involved you put a ring round '3' and if you think it is definitely the student's responsibility to select a topic, put a ring round '5'.

1. It is the advisors' responsibility to select a research topic.	1 2 3 4 5	The student is responsible for selecting her/his own topic
2. It is the advisor/s who decide which theoretical framework and/or methodology is most appropriate.	1 2 3 4 5	Students should decide theoretical framework and/or methodology they wish to use.
3. The advisor/s should develop an appropriate program and timetable of research and study for the student.	1 2 3 4 5	The advisor/s should leave the development of the program and timetable of research and study to the student.
4. The advisor/s are responsible for ensuring that the student has access to the appropriate services and facilities of the element and the University	1 2 3 4 5	It is the student's responsibility to ensure that they have located and accessed all relevant services and facilities for the research.
5. It is the advisors' responsibility to advise the student of the relevant policies, procedures and requirements relating to their candidature.	1 2 3 4 5	The student is responsible for being familiar with the relevant policies, procedures and requirements relating to their candidature
6. Student-advisor relationships are purely professional and personal relationships should not develop.	1 2 3 4 5	Close personal relationships are essential for successful supervision.
7. The advisor/s should insist on regular meetings with the student.	1 2 3 4 5	The student should decide when they want to meet with the Advisor/s.

[3] *Adapted from a form written by the Australian National University*

8. The principal advisor is responsible for coordinating all communication between the advisors and the student	1 2 3 4 5	The student should coordinate all communication between the members of the advisory team.
9. The advisor/s should check regularly that the student is working consistently and on task.	1 2 3 4 5	The student should work independently and not have to account for how and where time is spent.
10. The advisor/s should ensure that the thesis is finished by the maximum submission date.	1 2 3 4 5	As long as a student works steadily, they can take as long as they need to finish the work.
11. Advisor/s should insist on seeing all drafts of work to ensure that the student is on the right track.	1 2 3 4 5	Students should submit drafts of work only when they want constructive criticism from the advisor/s
12. Advisor/s should assist in the writing of the thesis if necessary and should ensure that the presentation is flawless	1 2 3 4 5	The writing of the thesis should only ever be the student's own work and the student must take full responsibility for presentation of the thesis
13. Advisor/s are responsible for decisions regarding the standard of the thesis	1 2 3 4 5	The student is responsible for decisions concerning the standard of the thesis.
14. Advisor/s are responsible for deciding on the recognition received for the student's and advisor/s contributions to publications that arise during and after candidature.	1 2 3 4 5	The student should decide on the recognition received for joint contribution to publications that arise during and after candidature.