

Mentoring philosophy

Scientific training is a serious responsibility to me, so I've composed a list of expectations for students and mentors that I hope will facilitate excellent advising relationships and mutual success. If you apply to work in my lab, read this carefully and prepare to have an in-depth discussion about your career goals and how we might work together to achieve them. If you are a prospective student who eventually joins the lab, we will refine this contract together so that it works for your unique strengths and challenges.

Additionally, please read these two papers for some advice on "how to grad student" (don't read one without the other!):

<https://faculty.washington.edu/hueyrb/pdfs/advice.pdf>

<https://faculty.washington.edu/hueyrb/pdfs/reply.pdf>

Mentoring pact of the Dupuis research group

We study a diverse blend of basic and applied research questions related to insect systematics, genomics, speciation, population genetics, and molecular ecology. All these fields fall under the umbrella of evolutionary biology, and as evolutionary biologists, we need to be curious, ambitious, adaptive, collaborative, communicative, brave, and extremely hard-working.

Remember, my investment in you will be proportionate to the effort and depth of thought that *you* put into your work. The following expectations are not necessarily ranked in order of importance, but the first several points are extremely important to being a successful graduate student.

I expect students to:

Be excited about evolution. Graduate research is challenging and not financially rewarding, but it is an incredible opportunity to explore your curiosity about the natural world. If this drives you, you will do well. This means you should be excited to read the literature deeply, watch countless research seminars about various evolutionary phenomena, and dig into work in the lab and the field. If these things don't appeal to you, the many challenges of grad school may not feel worth it. Please make sure this is a path you are passionate about before diving in.

Work smart and work hard. Grad school demands a huge investment of both time and mental energy. While scheduling time off is important, research projects and study will often stretch your schedule outside of a traditional 9-5, and your work hours may be hard to predict. Regardless of what your assistantship specifies, being a graduate student is way more than a full-time job. Moonlighting elsewhere is not compatible with success in academic research.

Become an expert in your field. Grad school requires a **lot** of reading, and deep thinking. I will help you identify a preliminary reading list and develop ideas for achievable research objectives, but it's ultimately *your* responsibility to be familiar with emerging work in your field, identify a worthy question, identify the best system for answering it, and execute the work. I expect you to understand and articulate both the basic and applied implications of your work and its importance within the context of the current body of knowledge.

Communicate regularly and ask for the help you need. I expect to see you regularly and discuss updates in research and professional development. Weekly individual meetings can be scheduled formally if preferred, but I maintain an open-door policy. To prepare for constructive meetings, I ask students to consider the following when we meet:

- How did you do with accomplishing your goals from our last meeting?
- What are your logistical needs?
- What are you struggling with or confused by?

Be respectful of my time. My door is always open, but also remember that being your advisor is just one of my many jobs. I'm teaching undergrads, writing grants to support our science family, forging relationships with collaborators, shouldering a hefty ton of department service, editorial responsibilities, and writing papers. My investment in you will be vast and profound, but I cannot be responsible for the day-to-day logistics of your project or help with easily googled minutia. Always try to solve problems first yourself before bringing them to me. Tap into the brain trust of other folks in the lab and department and get peer feedback on your writing before you send it to me.

Document your work. Keep physical and digital copies of datasheets organized and identifiable in a known and accessible location. For each project, I recommend updating a shared google doc regularly with precise details about all activities related to data collection and analysis. Finally, deposit electronic data and metadata (barcode/specimen info, etc.) in the shared lab folder on google drive and keep multiple copies of all data generated as part of lab projects.

Be an active member of the lab, department, and academic community. I expect students to work regularly in our office on campus, attend seminars, attend lab meetings, and actively participate in the department, group research, and professional development activities at UK. Lab meetings are dedicated to discussing logistics, practicing presentations, reviewing manuscripts (ours and others), and fellowship.

Be adaptive. If there is one thing I can guarantee, it's that you won't be lucky enough to propose and execute field or lab experiments without unexpected delays, hiccups, or giant catastrophes. You must respond to such disasters by being resilient, adjusting quickly, rapidly rearranging work schedules, and preparing multiple contingency plans to ensure that you are ready to make data out of misfortune.

Be proactive. I expect students to take primary ownership of the over the logistics of their projects, so don't wait for prescribed instructions on how to complete your experiments. Your job as a graduate student is to learn how to design and execute your research yourself, and I expect that you will become independent in doing so within the first year. I will be happy (and expect) to give you guidance on a protocol that you draft.

Accept and implement guidance. Advising relationships don't work unless you trust your mentor and heed their advice. Remember that all the papers I send, seminars I refer, and suggestions for your research I make are for your benefit. Ignoring those suggestions and recommendations is not in your best interest. Excellent work requires tons of revision and begins

with a lot of mistakes and iterative corrections. Prepare to respond to feedback with grace and hard work.

Send quality material for review in advance. To help you prepare excellent work, I need time to digest and comment on writing, slides for presentations, etc. I'm happy to look at new material as a first viewing in a 1-on-1 meeting, but don't be surprised if I don't have much to say or provide contradictory suggestions after I have time to think about your work.

Apply for external funding. Grantmaking is a key skill for careers in academics and science. I promise to provide financial support as long as you meet the expectations of this pact but composing grant proposals will enhance your training and allow you to expand your research. I will help you identify good resources for seeking funding and guide you as you develop proposals. Note, we must follow UK guidelines for grant submissions, which adds at least 2-3 weeks to grant deadlines; do not procrastinate.

Help each other. Someday you will be in over your head, and you'll depend on friends and lab mates to help you with field- or lab-work emergencies or review your writing. There will be several days a year when we experience "all hands-on deck" situations, and I expect you to participate joyfully and move as a team. If you're on the receiving end of help, prepare a clear plan for group work to avoid wasting your lab mates' time. Remember to be gracious, and make sure you're the hardest working team member on your own project.

Take care of your business. Students are responsible for paperwork related to payroll, ordering supplies, and degree progress. I'll provide guidance on useful coursework and selecting committee members but keeping track of other logistical details and making sure you meet graduate program requirements is your responsibility.

As your advisor, I promise to:

Treat you like a colleague. I will welcome and carefully consider your feedback about your mentoring experience, co-authorship, the direction of research, and even my own writing. Hold me accountable if I'm failing to meet the expectations described below. I value your perspective and depend on input from students to help me do excellent work as a scholar, teacher, and mentor. Students will be included as stakeholders in decisions about the direction of our research program, laboratory facilities, and recruitment of graduate students and undergraduate research assistants.

Guide and challenge you as you develop a powerful research program. I train students to be independent and productive scientists. That means that instead of delivering a prescribed research project to my students, I will consider you a part of a collaborative research team. I will leverage my experience and knowledge in our field to help you refine your ideas into interesting, achievable, and valuable projects to jumpstart your career. Sometimes that means I will push you towards a more ambitious question, and sometimes I will help you simplify an unfeasible goal. MSc students can expect a more prescriptive structure from me in project development, whereas PhD students will have an opportunity for more ownership over the process.

Answer your questions. Sometimes I accidentally bury emails in my inbox, but I never intend to leave questions dangling with y'all. If you don't hear from me in 48 hours during the week, send another message; I won't take it personally! However, if your question is easily googled, I will politely remind you to be resourceful. No guarantees about responses to emails/Slack/text messages during weekends.

Help you find the help you need. No advisor can be an expert in every area, and there will come times when you need to seek outside advice and collaboration. I will provide guidance on who to contact for help and help introduce you to leaders in your field that you can consult for supplementary mentorship.

Provide financial and logistical support for your work. As long as you meet the expectations described above, I will make sure you have the resources you need to execute your research. Although I expect students to take ownership over logistics of their own projects, I will help navigate administrative challenges of acquiring space and materials for your work.

Review your writing and other products promptly. Unless I'm at a meeting or approaching a grant deadline, I plan to provide feedback on writing within at least two weeks. Being proactive about communicating your writing schedule to me will help our coordination.

Prepare you for a productive career. Your professional success is inextricably linked to mine. I will challenge you to make specific career goals as early as possible so that I can help you prepare yourself for academia or other avenues. Specifically, I will connect you with opportunities for conferences, workshops, and extension/outreach projects that will beef up your CV. At the end of a successful graduate program, I will help you find job opportunities, prepare application materials, and provide strong advocacy through reference letters and personal recommendations to my network of colleagues.

Julian Dupuis

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(with lots of assistance/insight from Boyd Mori's and Carmen Blubaugh's lab contracts)