

Mentoring Compact for Undergraduate Researchers

Drown Lab (updated May 2016)

Mission Statement -- Central Goals

To do quality science - the overall goal of our research is to develop a mechanistic understanding by which abiotic and biotic forces drive the direction and rate of evolution of coevolutionary interactions.

As an undergraduate researcher in this lab, you will learn how research is done and get a sense for what life would be like if you choose a career in research through graduate school. Please take advantage of this time!

What I expect from you

You will take ownership of your educational experience

- Early on we will discuss your personal and program goals for your experience. You will need to know what you are required to complete for your research credits and you are responsible for making this happen on time. If there are elements where you need feedback from me, please involve me early!
- You have the primary responsibility for the successful completion of your degree. This includes commitment to your work in classrooms and the laboratory. You should maintain a high level of self-motivation, engagement, scientific curiosity, and ethics.
- My approach to grades for undergraduates is to base them on your professionalism and effort. I have no problem giving everyone an A, but an A must be earned.

You will maintain a professional attitude and work to improve your research skills

- *Establish and maintain a regular research schedule.* Part of your job is to be in the lab and talk with other people about your research. Be on time for all meetings (with me, or the entire group). If a situation comes up that you will need to be late or adjust your hours, please communicate this to me. While you can adjust your hours to accommodate deadlines in other classes occasionally, make your research time a priority. One of the most important skills in life is balancing multiple demands so use college as a practice!
- *Keep detailed lab notebooks* – these are essential to turn your hard work into a finished paper. Your notes should allow your work to be reproduced (meaning they must be understandable by people other than yourself). At a minimum each experiment should clearly identify the date, the purpose, what you did (including anything that didn't go well), the results, and your conclusions.
- *Backup your data.* Use the Drown Lab Share on Google Drive.
- *Dive into the scientific literature* - read the papers I suggest, run a literature search and read papers suggested by this search. Start annotated online bibliography (Mendeley is an easy option). Spend some time each week updating your literature list and just browsing – if you plan to stay in science this is a good way to find out what other areas sound interesting.

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- *Think ahead.* Learn how to plan your experiments so that they help you progress on the overall goal of your project. Make sure your experiments address the question of interest correctly – this includes learning how to do the appropriate controls, techniques, etc. ‘At the Bench’ Chapters 1-6 provide general advice on how to set up your lab space/desk space, keeping a notebook and planning experiments. Work with me to make sure your experiments are well thought out before you begin.
- *Work safely.* Before beginning in the lab you must complete all required safety training. Be sure to label everything you work with in the lab so that others know what it is. When working in the labs of other investigators, be polite, neat, and gracious. Always follow their rules. If something breaks during your use, report it immediately to the appropriate person.
- *Learn how to accept and utilize constructive criticism.* This feedback is intended to improve your work and is part of the scientific training process.
- **Be respectful, tolerant of, and work collegially with laboratory colleagues: respect individual differences in values, personalities, and work styles.**

You will communicate clearly

- *Ask for help.* Remember that all of us are “new” at various points in our careers. If you feel uncertain, overwhelmed, or want additional support, please overtly ask for it. I welcome these conversations and view them as necessary.
- *Offer feedback.* If there is something about my mentoring style that is proving difficult for you, please tell me so that you give me an opportunity to find an approach that works for you. No single style works for everyone.
- *Don’t fear meetings.* Do not cancel meetings with me if you feel that you have not made adequate progress on your research; these might be the most critical times to meet with a mentor.
- *Be prompt.* Respond promptly (in most cases, within 24 hours) to emails from anyone in our lab group and show up on time and prepared for meetings. If you need time to gather information in response to an email, please acknowledge receipt of the message and indicate when you will be able to provide the requested information.

What you can expect from me

I will work hard for the good of the lab group; the success of every member of our group is my top priority, no matter their personal strengths and weaknesses, or career goals.

I want my students to gain the ability to think critically and to use the scientific method to analyze problems and then to draw logical conclusions. Accomplishing this goal requires that I teach my students how to break down a problem, how to critically analyze data, and how to come up with an answer supported by evidence. When students acquire analytical skills to solve problems, they gain the ability to apply what they have learned to new problems and come up with creative solutions.

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Mentoring

I am committed to mentoring you now and in the future. I am committed to your education and training while in my lab, and to advising and guiding your career development. I will work to promote you and your work. I will help you:

- Learn how to plan, design, and conduct high quality scientific research
- Learn how to present and document your scientific findings
- Be honest, ethical, and enthusiastic
- Take advantage of professional development opportunities

Timeliness

I will be available for regular meetings and will provide timely review of research. I will do my best to provide an open door policy and respond quickly to emails. Please be aware that there will be times when I will be unavailable due to other obligations. For abstracts and small data questions, I will generally be able to review in 24 hours, for larger works, I will need 1 week.

Safe Environment

I will provide a work environment that is intellectually stimulating, supportive, safe, and free from harassment. I take seriously any difficulties you experience in relationship to this statement – if there are conflicts with another lab member, please inform me and I will work with you and the other lab member to find a resolution. I will strive to understand your unique situation and am open to your suggestions on how to improve your experience in the lab.

Meetings

Take notes during meetings. If you need time for notes, ask participants to slow down.

Individual meetings

You should *plan to meet with me once a week* where we will: 1) address the previous week's accomplishments, and 2) unexpected issues, and 3) identify future goals. Come prepared to discuss/present your recent research and next steps. If it helps you to prepare for this meeting, you can write an agenda including what you have done and what you propose to do and email it to me. *After an individual meeting*, use your notes to write down your understanding of the decisions made at that meeting. As well as any decisions made, be sure to cover your plan of work for the time until the next meeting. When you have finished, email your summary to me for confirmation.

Lab group meetings

Lab meetings will be held every other week and will rotate between a variety of formats: research presentations and paper discussions. This time will be used for discussions of literature focusing on understanding the background and context of the field as well as exploring analysis methods. Attendance is mandatory – active participation is essential!

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Please list any additions:

By signing below, we agree to these goals, expectations, and working parameters for this research project.

Mentee signature: _____

Date: _____

Mentor signature: _____

Date: _____