

# Graduate Mentor/Mentee Compact

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## The Broad Goals Of My Research Program

As part of my job as a professor, I am expected to write grants and initiate research that will make tangible contributions to science, the academic community, and society. You will be helping me carry out this research. It is imperative that we carry out good scientific methods, and conduct ourselves in an ethical way. We must always keep in mind that the ultimate goal of our research is publication in scientific journals. Dissemination of the knowledge we gain is critical to the advancement of our field. I also value outreach and informal science education, both in the classroom and while engaging with the public. I expect you to participate in this component of our lab mission while you are part of the lab group. It is my goal to equitably enable the success of all my students.

## What I Expect From You

Another part of my job as a professor is to train and advise students. I must contribute to your professional development and progress in your degree. I will help you set goals and hopefully achieve them. However, I cannot do the work for you. In general, I expect you to

- 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
- Be engaged within the research group and collaborate with at least one other group
- Treat your lab mates, lab funds, equipment, and materials with respect
- Take advantage of professional development opportunities
- Obtain your degree
- Work hard but balanced with your life outside the lab
- Keep up with the literature! (Reading a paper a week is a baseline, you will need to read more while writing papers or designing projects)
- Keep the communication lines active while at work (SLACK preferred, email ok)

### ***You will make academic and research integrity your first priority***

- ✓ Make sure that you record ALL details of your experimental activities and findings (dates, compositions, sample identity, etc) to avoid mistakes and poor data management and analysis. In this lab we **will never, ever, under any circumstance mishandle or manipulate data**. No matter how stressed we all are, it is not worth it. It will end your career and mine.
- ✓ You **will never resort to plagiarism in your manuscripts**. That includes self-plagiarism. Even things like "Materials and Methods" which are hard to re-word should be written differently enough that it doesn't get flagged. All journals these days have computer programs that flag plagiarism. Tempting sections to plagiarize are abstracts, opening Introduction statements, and "Materials and Methods". ALWAYS re-word, even if ever so slightly. I can NOT possibly oversee your paper AND also look for plagiarism. You might consider running one of those plagiarism programs on your document before handing it to me. Plagiarism will

be found sooner or later, if it is found after your paper is submitted, it is extremely problematic. It will break our trust bond, it can potentially ruin your reputation and mine, it can lead to loss of federal funding, or even cost your position entirely.

### ***You will take ownership over your educational experience***

✓ **Acknowledge that 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 professionalism, self-motivation, engagement, scientific curiosity, and ethical standards.

✓ **Ensure that you meet regularly with me and provide me with updates on the progress and results of your activities and experiments.** Make sure that you also use this time to communicate new ideas that you have about your work and challenges that you are facing. Remember: I cannot address or advise about issues that you do not bring to my attention. An effective meeting is one where you prepare a presentation with “what I did this week”, results, “plans for the next week”. Make a single presentation file that you add dated slides each meeting. Upload your file to box after each meeting.

✓ **Be knowledgeable of the policies, deadlines, and requirements of the graduate program, the graduate school, and the university.** Comply with all institutional policies, including academic program milestones, laboratory practices, and rules related to chemical safety, biosafety, and fieldwork.

✓ **Actively cultivate your professional development.** UIUC has outstanding resources in place to support professional development for students. I expect you to take full advantage of these resources, since part of becoming a successful engineer or scientist involves more than just doing academic research. You are expected to make continued progress in your development as a teacher, as an ambassador to the general public representing the university and your discipline, with respect to your networking skills, and as an engaged member of broader professional organizations. The graduate school has a regular seminar series related to professional development. All graduate degree programs require attendance at a weekly seminar. Various organizations on campus engage in science outreach and informal education activities. Attendance at conferences and workshops will also provide professional development opportunities. When you attend a conference, I expect you to seek out these opportunities to make the most of your attendance. You should become a member of one or more professional societies.

✓ **Contribute to the lab by teaching and/or receiving a scholarship/award.** Most of my students receive some sort of award and/or teach for one semester. I encourage you to do so. Teaching a semester is a wonderful professional development opportunity and it contributes to advancing your communications skills which are important for most jobs. Writing a grant proposal for an award and scholarship is another form of boosting your communication skills while contributing to the lab.

### ***You will be a team player***

✓ **Attend and actively participate in all group meetings, as well as seminars that are part of your educational program.** Participation in group meetings does not mean only presenting your own work, but providing support to others in the lab through shared insight. You should

refrain from using your computer or phone during research meetings. Even if you are using the device to augment the discussion, it is disrespectful to the larger group to have your attention distracted by the device. Do your part to create a climate of engagement and mutual respect.

✓ **Strive to be the very best lab citizen.** Take part in shared laboratory responsibilities and use laboratory resources carefully and frugally. Maintain a safe and clean laboratory space where data and research participant confidentiality are protected. Be respectful to, tolerant of, and work collegially with all laboratory colleagues: respect individual differences in values, personalities, work styles, and theoretical perspectives.

✓ **Be a good collaborator.** Engage in collaborations within and beyond our lab group. Collaborations are more than just publishing papers together. They demand effective and frequent communication, mutual respect, trust, and shared goals. Effective collaboration is an extremely important component of the mission of our lab.

✓ **Out with grace.** Before you leave, you have an obligation to transfer most of your skills to the more junior lab members. When you leave make sure to clean your area, label all samples clearly and transfer them to another student. Discard samples or chemicals that will not be used in the future by other lab members. (See Lab Checkout procedures document).

✓ **Acknowledge the efforts of collaborators.** This includes other members of the lab as well as those outside the lab.

### ***You will develop strong research skills***

✓ **Take advantage of your opportunity to work at a world-class university by developing and refining stellar research skills.** I expect that you will learn how to plan, design, and conduct high-quality scientific research.

✓ **Challenge yourself by presenting your work at meetings and seminars as early as you can and by preparing scientific articles that effectively present your work to others in the field.** The “currency” in science is published papers: they drive a lot of what we do. And because our lab is supported by taxpayer dollars, we have an obligation to complete and disseminate our findings. I will push you to publish your research as you move through your training program, not only at the end.

✓ Students pursuing a doctoral degree will be expected to be lead author on at least two journal paper submissions, preferably three or four.

✓ Students will need to have one paper submitted at the very least to advance to your preliminary examination. P.S. Your preliminary examination is based on 2-4 projects that have a common topic. Your preliminary examination presentation describes completed projects and future projects. About 60% of the slides are on completed/published/submitted work followed by ~40% preliminary data and future plans to complete. **Note: The prelim committee needs to be selected with me and contacted 3 months ahead of the planned date. See example of how to compose the email to the committee in shared box folder.**

✓ **Keep up with the literature so that you can have a hand in guiding your own research.** Block at least 1 hour per week to peruse current tables of contents for journals or do literature searches. Participate in journal clubs. Better yet, organize one!

✓ **Maintain detailed, organized, and accurate laboratory records.** Be aware that your notes, records, and all tangible research data are my property as the lab director. When you leave the lab, I encourage you to take copies of your data with you. But one full set of all data must stay in the lab, with appropriate and accessible documentation. Regularly back up your computer data to the server and/or box.

✓ **Be responsive to advice and constructive criticism.** The feedback you get from me, your colleagues, your committee members, and your course instructors is intended to improve your scientific work.

### ***You will work to meet deadlines***

✓ **Strive to meet deadlines: this is the only way to manage your progress.** Deadlines can be managed in a number of ways, but I expect you to do your best to maintain these goals. We will establish mutually agreed upon deadlines for each phase of your work during one-on-one meetings at the beginning of each term. There must be a balance between time spent in class and time spent on research and perhaps on outreach or teaching. As long as you are meeting expectations, you can largely set your own schedule. It is your responsibility to talk with me if you are having difficulty completing your work, and I will consider your progress unsatisfactory if I need to follow up with you about completion of your lab or coursework.

✓ **Be mindful of the constraints on my time.** When we set a deadline, I will block off time to read and respond to your work. If I do not receive your materials, I will move your project to the end of my queue. Allow a minimum of 1 week prior to submission deadlines for me to read and respond to short materials, such as conference abstracts, and 4 weeks for me to work on manuscripts or grant proposals. Please do not assume I can read materials within a day or two, especially when I am traveling.

### ***You will communicate clearly***

✓ **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.

✓ **Let me know the style of communication or schedule of meetings that you prefer.** 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; no one style is expected to work all the time. 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 to SLACK messages/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/SLACK, please acknowledge receipt of the message and indicate when you will be able to provide the requested information. I will of course not expect responses outside working hours unless some extenuating circumstances arise.

✓ **Discuss policies on work hours, sick leave, and vacation with me directly.** Consult with me and notify fellow lab members in advance of any planned absences. I expect that most lab members will not exceed 2-3 weeks of personal travel away from the lab in any given year but I am open to discussion. Work-life balance and vacation time are essential for creative thinking and good health so I encourage you to take vacation. Be aware, however, that there will be times it may not be ideal to schedule time away (e.g. during the semester where you have to attend seminars).

✓ **International travel:** approval needs to be obtained also with the department administration (Karyn Traum and Allison Sutton) so plan ahead. If your RA comes from a federal grant (most of you are on this category) there are strict rules about what work you can do while traveling abroad. If for some reason you are stuck abroad (VISA issues, etc) for 4 weeks or more without having been pre-approved to do so, your RA may have to be paused. There is nothing I can do about this. They will also stop my salary if this happens to me.

✓ **New federal funding mandates (as of Sep 2024):** You have to seek approval from me AND the department administration (Karyn Traum and Allison Sutton) to work on your project remotely. Because of this **you are required to be present in the lab at least 4 hours a day during 9:00am-5:00 pm.** The department is audited every so often and they have records of when your cards are used to get through the lab doors. Of course, things can happen precluding you to come to work any given day but you have to let me know as soon as possible, even if you didn't have a meeting with me.

✓ **Discuss policies on authorship and attendance at professional meetings with me before beginning any projects to ensure that we are in agreement.** I expect you to submit relevant research results in a timely manner. Barring unusual circumstances, it is my policy that students are first author on all work for which they took the lead on data collection and preparation of the initial draft of the manuscript.

✓ **Help other students with their projects and mentor/train other students.** This is a valuable experience! Undergraduates working in the lab should be encouraged to contribute to the writing of manuscripts. If you wish to add other individuals as authors to your papers, please discuss this with me early on and before discussing the situation with the potential coauthors.

## What You Can Expect From Me

✓ **I will work tirelessly** 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 will be available for regular meetings and informal conversations.** My busy schedule requires that we plan in advance for meetings to discuss your research and any professional or personal concerns you have. Although I will try to be available as much as possible for "drop-in business," keep in mind that I am often running to teach a class or to a faculty meeting and will have limited time.

✓ **I will help you navigate your graduate program of study.** As stated previously, you are responsible for keeping up with deadlines and being knowledgeable about requirements for your

specific program. However, I am available to help interpret these requirements, select appropriate coursework, and select committee members for your oral exams.

✓ **I will discuss data ownership and authorship policies regarding papers with you.** These can create unnecessary conflict within the lab and among collaborators. It is important that we communicate openly and regularly about them. Do not hesitate to voice concerns when you have them.

✓ **I will be your advocate.** If you have a problem, come and see me. I will do my best to help you solve it.

✓ **I am committed to mentoring you, even after you leave my lab.** I am committed to your education and training while you are in my lab, and to advising and guiding your career development—to the degree you wish—long after you leave. I will provide honest letters of evaluation for you when you request them.

✓ **I will lead by example and facilitate your training in complementary skills needed to be a successful scientist, such as oral and written communication, grant writing, lab management, mentoring, and scientific professionalism.** I will encourage you to seek opportunities in teaching, even if not required for your degree program. I will also strongly encourage you to gain practice in mentoring undergraduate and/or high school students.

✓ **I will encourage you to attend scientific/professional meetings and will make an effort to fund such activities.** I will not be able to cover all requests, but you can generally expect to attend at least one major conference per year, when you have material to present. Please use conferences as an opportunity to further your education, and not as a vacation. If you register for a conference, I expect you to attend the scientific sessions and participate in conference activities during the time you are there. Travel fellowships are available through the department and some professional societies. I will help you identify and apply for these opportunities.

✓ **I will strive to be supportive, equitable, accessible, encouraging, and respectful. I will try my best to understand your unique situation, and mentor you accordingly.** I am mindful that each student comes from a different background and has different professional goals. It will help if you keep me informed about your experiences and remember that graduate school is a job with very high expectations. I view my role as fostering your professional confidence and encouraging your critical thinking, skepticism, and creativity. If my attempts to do this are not effective for you, I am open to talking with you about other ways to achieve these goals.

✓ **Thesis documents and presentation.** I will support the preparation of the thesis document and its distribution (I will sponsor the binding of 3 copies). You are free to consult previous thesis of the group and I will provide feedback on your thesis/presentation too. However, keep in mind that your thesis (and preliminary examination) documents are very much **your** dissertation. I am much more involved in providing feedback in papers as I am an author but I will only interfere in your thesis writing if there are scientific mistakes.