Lab Mission, Values, and Expectations
Hydrology Lab at University of Pittsburgh
John Gardner, PI

Lab Mission

Our lab mission is to 1) learn how the earth works through excellent research and building knowledge and products to share with the community, 2) create a more diverse and inclusive academic culture by acting with integrity, empathy, and actively supporting anti-racism. 3) prepare lab members for their individual career paths and goals.

Our lab agreement is a living document. As a group, we will revisit this each year to re-assess roles and expectations. The ideas expressed below are adapted from colleagues' documents (particularly Richard Marinos, Joanna Blaszczak, Margaret Zimmer, Emily Bernhardt, and Tamlin Pavelsly) and conversations with many others.

Group Expectations (applies to everyone)

- **Act with integrity when interfacing with the public.** When communicating our science or engaging in public outreach, we are representing our lab group, our university, and science in general. It is important to engage with kindness, openness, and curiosity in an exchange of ideas and knowledge.
- **Be mindful of safety.** Safety in the laboratory and field is a matter of professional integrity. No experiment is worth one's health.
- **Be intellectually honest.** Being intellectually honest means:
    - Generously crediting your sources and collaborators and never plagiarizing.
    - Never fabricating or manipulating data to achieve a desired result.
    - Acknowledging and learning from your mistakes.
- Maintain **zero tolerance for harassment and violence**. If a lab member observes any sort of sexual, physical or emotional harassment directed to or coming from a lab member, they should report it to John Gardner, the chair of the department, or the Office of Equity, Diversity and Inclusion. Victims are strongly encouraged to do the same. Any reports may be made anonymously.
- **Be actively anti-discriminatory** regarding race, nationality, ethnicity, gender, sexual orientation, religion, cis/trans status, disability, age, physical appearance, and social class. Lab members are not only expected to refrain from discriminatory speech and actions, but are also expected to speak positively against such behaviors when observed in others. Further, lab members are encouraged to engage in self-reflection to identify and process their own (explicit or implicit) discriminatory thought patterns.
- **Be dedicated to your work.** Getting paid to learn how the world works is a truly awesome job, and we expect that lab members will approach their positions with the seriousness and earnestness.
- **Maintain adequate records** of scientific experiments, including keeping original data, methods, a detailed lab/field notebook. In most cases, this will be well documented code with an organized file folder structure.
- **Share data and code freely with lab members.** All data and code produced in the lab belongs to the whole lab, and it is expected to be documented and shared for the use of others.

- **Publish research.** If research isn't published, it's like it never existed.
- **Present research** at scientific conferences, and use conference travel as a vehicle for networking and professional advancement.
- **Engage with other lab members' research**, including reading paper drafts, helping out during fieldwork blitzes, and talking over big ideas.
- **Apply for external funding** for both research and professional development.
- Clearly **communicate expectations** to one another. Expectations should be concrete and achievable.
- **Clearly communicate career goals** so that John and other lab members can help you achieve them. All types of careers (inside and outside of academic research) are valid and interesting and it is common for these goals to shift over time.
- **Address interpersonal conflict** as it arises.
    - *For conflicts not involving John*: The first step in resolving conflict is simply to talk to the other person and make your position known. If this hasn't been fruitful, please tell your concerns to John to help find strategies for resolution or intervene directly.
    - *For conflicts involving John:* Everyone will be frustrated/disappointed/mad at their advisor at some point in their graduate school career. John encourages lab members to express their frustrations directly. If the inherent power dynamic is intimidating, lab members are encouraged to use their peers as resources to develop effective strategies for dealing with the advisor-advisee relationship. The director of graduate studies or the department chair can mediate discussions if the lab member feels it's necessary. Finally, mediation services are available from the university if a lab member would prefer trained mediators to facilitate conversations.
- **Tell the lab about their successes** so that we can celebrate them together!

Role Specific Expectations

Lab members can expect that John will (in addition to group expectation):

- Always **treat lab members with respect**.
- Be **engaged and thoughtful** when discussing the research, career development, and academic progress of lab members.
- **Provide timely guidance** on academic affairs, course selection, scheduling, and navigating academic politics.
- **Be clear about the amount of financial support** that he can provide, both in the present and, as far as possible, into the future.
- **Help lab members work towards their chosen career goals,** advise lab members on career prospects, and make sure that their research program is well-aligned with their career goals. I will work to adjust my mentoring to individual career goals of lab members.
- **Respect the personal circumstances of every lab member** when setting expectations, including finances, personal health, disabilities, and academic background/preparation.
- **Provide detailed feedback on manuscript drafts and proposals within two weeks,** or inform a lab member immediately if there is an exceptional case when this timeline can not be met.
- **Meet with you one-on-one** weekly to bi-weekly (more, as necessary) to discuss progress on projects and your professional development.
- **Be receptive of constructive criticism** from all lab members. We are all learning together and need feedback to improve.

Expectations for graduate students (in addition to group expectations):

Graduate school is an apprenticeship, a job, and an education. In other words, students are simultaneously learning the collective knowledge of a discipline and gaining technical skills, while contributing to that knowledge base. And getting paid to do it! Graduate school can be an expanding and rewarding experience intellectually and personally. There are many approaches to graduate school. Some frame it as a 9-5 job and others use the flexibility offered by graduate school to design it around their preferences/life circumstances. Do what works for you, but expectations include:

- **Be prepared**. Come to one on one and lab meetings with a list of the topics you want to discuss.
- **Develop your own research questions and tastes while being open to shifting research activities**. I encourage students to think deeply about a problem and what really excites them. However, some projects may require students to create a specific product for collaborators, or work on a grant may be awarded half-way through a student's tenure that has a very specific deliverable. Be open to collaborating on these projects. In many cases, once a product is produced, how a lab member wants to analyze, frame, and publish the results is flexible.
- **Apply for funding** whether for conferences, fellowship, or research (I will help you identify opportunities).
- **Be a team player**. Help other lab members with coding problems, field work, and share data.
- **Publish ~1** manuscript as a MS student and ~3 manuscripts as a PhD student during your time in the lab (at least 1 should be submitted prior to the final dissertation defense). Publication types may be flexible depending on career goals (e.g. software packages, scientific papers, pedagogy papers, curricula etc.).
- **Attend ~1** conference/workshop per year on average to present research, learn new skills, or expand professional development.
- **Publish data in open repositories and code on github**. We will develop a lab group github account.
- **Provide feedback** to John to help improve team management and mentoring.

Expectations for postdoctoral colleagues (in addition to group expectations):

- **Assist in mentorship** of undergraduate and graduate students.
- **Be prepared**. Come to one on one and lab meetings with a list of the topics you want to discuss.
- **Apply for funding** whether for conferences, fellowship, or research.
- **Be a team player**. Help other lab members with coding problems, field work, and share data.
- **Publish ~1** manuscript per year on average (certain projects require more or less publications, and some may be more data product focused).
- **Publish data in open repositories and code on github**. We will develop a lab group github account.
- **Discuss** career goals and applications with John.
- **Provide feedback** to John to help improve team management and mentoring.